

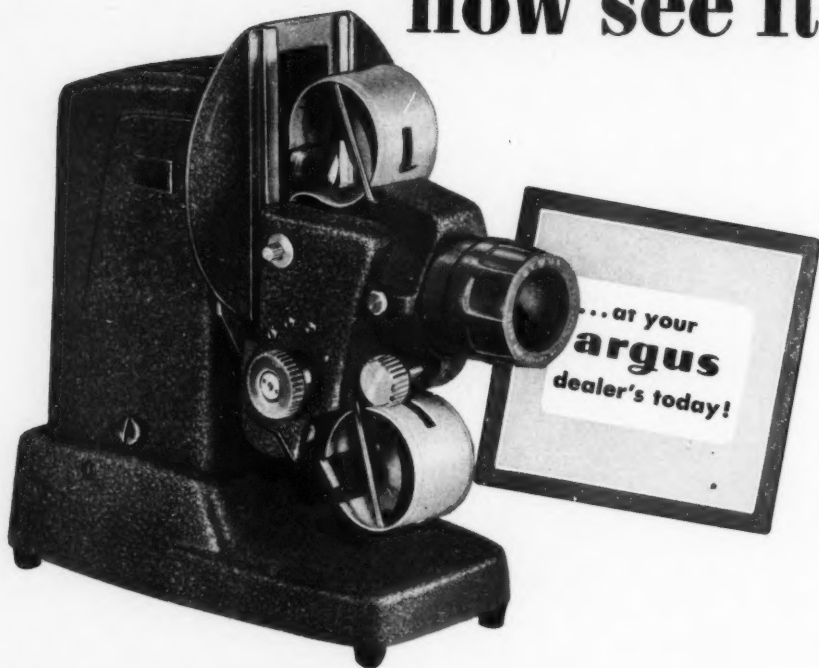
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Can You Guess How This Was Made? page 18.

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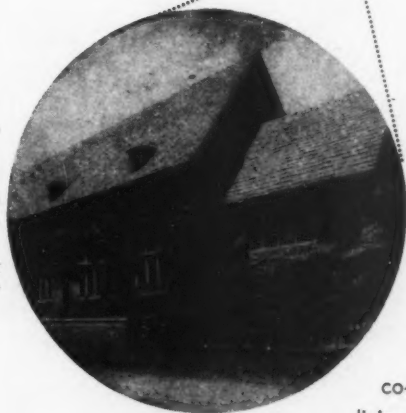
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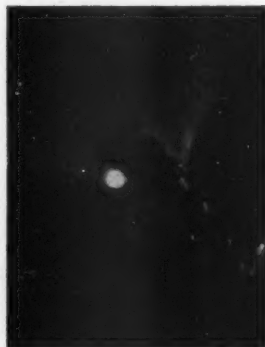
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Cover by Ray Atkeson



Shoot Pictures At Midnight

(See page 64)

MINICAM PHOTOGRAPHY (TITLE REG. U. S. PAT. OFF.) PUBLISHED AT 22 EAST 12th ST., CINCINNATI, OHIO. PUBLISHED MONTHLY BY THE AUTOMOBILE DIGEST PUBLISHING CORP. YEARLY SUBSCRIPTION, \$2.50 IN U. S. A. AND POSSESSIONS, CANADA AND COUNTRIES IN PAN-AMERICAN POSTAL UNION, \$3.00. ELSEWHERE, \$3.50. SINGLE COPIES, 25c. CANADA, 30c. EASTERN ADVERTISING OFFICE: EVERETT GELLERT, 43 PARK AVENUE, NEW YORK CITY, PHONE MU 9-2378. MIDWEST ADVERTISING OFFICE: BERNARD A. ROSENTHAL, 333 NO. MICHIGAN, CHICAGO, ILL. PHONE ANDOVER 7132-33. WEST COAST ADVERTISING OFFICE: SWAIN ASSOCIATES, 639 SOUTH WILTON PLACE, LOS ANGELES 5, CALIFORNIA, PHONE DUNKIRK 8-2248. ENTERED AS SECOND CLASS MATTER AT CINCINNATI, OHIO, U. S. A., MARCH 27, 1938, UNDER THE ACT OF MARCH 3, 1879. ESTABLISHED 1937.

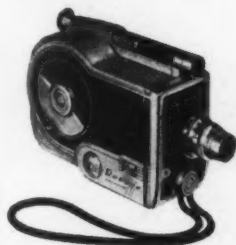


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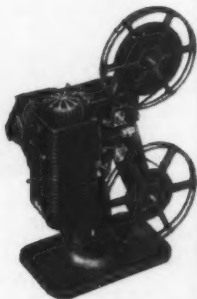
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Sirs:

We read with prejudiced interest your article
on "Slide Files" written by Mr. Charles G.
Mulligan. (Aug. issue, page 71—Ed.)

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undertake to manufacture a Slide File Box,
comes from the dealers who handle these items
day in and day out, and it seems that while
requests were made for the particular sizes we
manufacture, none were in evidence for the
size to accommodate the 120 transparencies.

We would be pleased to have an opinion
from Mr. Mulligan, and from other MINICAM
readers as well, as to whether they feel that a
Slide File made to accommodate a 120 or 620
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so, we should be only too happy to include
this size among the others.

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Glamour with a Leica

Sirs:

Way back in 1946 one of my fellow readers
expressed doubt in the Last Word column that
good glamour pictures could be shot with a
miniature camera having a short (50mm) focal
length lens.

The enclosed "before" and "after" pictures of
the same model will, I hope, help change his
mind if he is still of the same opinion. Both of
these shots were made with a Leica, and the



whole transition was brought about by costume,
pose, lighting, and makeup. The most difficult
part, incidentally, was getting the young woman
to let me submit both shots to MINICAM!

Claremont, Calif. ROBERT F. FRAMPTON

The ASMP

Sirs:

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suddenly discovered that they were, so to speak,
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made most of the large circulation magazines' photographic work.

The American Society of Magazine Photographers was the result. It provided an opportunity for men with common interests and problems to get together and iron out their joint difficulties. They exchanged technical information, arranged facilities for obtaining scarce equipment and began to look into the problems of rates, contracts and markets.

Today, the American Society of Magazine Photographers provides free legal service for its members, supports a group hospitalization plan, and acts as a source of information on business problems.

Its office, at 1476 Broadway, N.Y.C., has become a clearing house of information. Members scheduled for foreign assignments drop in to find out who's in Paris, whom they might run into in Johannesburg, and whether there's a color processing lab in Bombay. Editors call to find out where Joe Doakes can be reached, and whether there's an ASMP member in Idaho. Young people call for vocational guidance assistance.

This fall the American Society of Magazine Photographers is adding two more services to its members and to the general public. Its first annual, PHOTO-GRAPHIC '49, is being published by Whittlesey House (208 pages, \$6.95). The book will contain 190 pictures and articles on fashion photography as well as picture story, and magazine photography. Its

first exhibit is scheduled for October 15 to October 31 at the Pepsi-Cola Center, 47th and Broadway, where over 200 prints and transparencies will be shown, all of them produced by members of the American Society of Magazine Photographers.

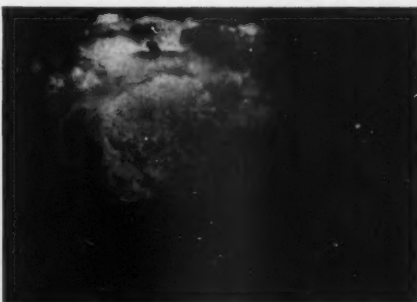
1476 Broadway, DORIS BIRNBAUM
New York 18. ASMP.

• For more about ASMP see Photo-Graphic '49 on page 50.—Ed.

Birth of a Tornado

Sirs:

I enjoyed the article on "Capturing Clouds" in the September issue, and especially the part about using red and yellow filters. Here is a



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FLYING START

toward PHOTO-STARDOM



By SIMON BRUNO

Touting "the wonderful staff at the SCHOOL OF MODERN PHOTOGRAPHY," GORDON E. KING is already celebrating his "flying start" toward stardom. Only months ago, he was an amateur, bursting with yearning for a photo-career. Resolutely looking forward to a long, all-over-hand climb, he sought the guidance of SMP's galaxy of celebrated stars. Yet, so speedily did he acquire professional facility, so quickly did SMP-aces teach him the "tricks of the trade" that he stepped immediately from SMP's cosmopolitan atmosphere into this post with one of Indiana's leading studios.



By JOSEPH DE RIGGEE

4. "A family affair" is JOSEPH DE RIGGEE's busy Massachusetts studio. With Mrs. D., he has built a flourishing business in just 2 years. Looking back, he recalls 6 long years of freelancing, never attaining the success of his dreams. He remembers the hard choice—to stow away his gear and "go back to school." Like careerists the world over, he chose SMP—and success. "At present," he writes, "we're booked solid for 2 months."



By C. W. ASHLEY, JR.

6. "Fenced in!" say many freelancers about their careers. Without the advanced techniques that stardom demands, they look with hungry eyes to SMP's world-famed ultra-modern instruction. Breaking off freelancing in Ohio, C. W. ASHLEY, JR. headed for SMP, for a flying start on a new and richer career. Confident now of his professional ability, he's off to Los Angeles—and brighter horizons.

1. "Down to Earth" came amateur SIMON BRUNO (see left), when his high-flying ambitions led him from studio to studio, seeking a camera career. "Experience or training!" they insisted. Eager for the skill that professionals demand, he toured one photo-school after another. His choice... SMP! Now, a trained careerist, he has discovered vast, new opportunities. Television is his goal, where he will capitalize on his flair for fashion photography.



By GORDON E. KING

5. Highest honors come naturally to ARTHUR HEITZMAN. Awarded a 4-year engineering scholarship, a brilliant career lay before him. But it had been the camera, not the compass, that filled his teens with thrills. Which life for Heitzman? On an exciting camera-tour of the world in the Navy, he found his answer. Vocational counselors told him of the modern training many receive at a good school. After careful consideration he beelined for SMP. Now a skilled professional, (see right) he plans to win new honors in the lush fashion field.



By BERNARD McMANUS

2. Heir to a photo-dynasty is BERNARD McMANUS. Grandson of an official photographer for West Point and Princeton; son of a New York commercial camera ace, his course had long been set for SMP. Swiftly armed by SMP's famed up-to-the-minute methods, his talents flowered. In his Dad's studio, his fine technique (see above) has made him a credit to a distinguished family of photography.



By A. C. HEITZMAN

7. This is the way to photo-success! "Springboard to fame" for careerists of all ages is SMP where specialized courses and advanced techniques are available. Tuition fees? Surprisingly moderate for complete study programs, day or evening. For outline of courses, visit SMP—or write H. P. Sidel, Director, Dept. M10.



cloud picture I recently shot with an Argus 35mm camera on Infra-red film.

The exposure was F:4 at 1/25 of a sec. with a Wratten-A filter over the camera lens. The picture was made in midafternoon and I used Infra-red film to darken the sky so the clouds would stand out better. About an hour later, two tornados lowered from the clouds and raised havoc about thirty miles away.

Harper, Kansas DUANE HOSTETLER

He told "Pappy" how

Sirs:

At a Palomino horse show recently I saw a photographer shooting pictures with equipment that looked like it had come from a rummage sale. Since he was obviously going at the whole thing backwards, I stuck my neck out by offering him a few tips. He listened carefully to everything I had to say and thanked me when I was finished.

About an hour later I mentioned the incident to a friend, who took one look at the photographer and began to laugh. 'Know who the guy is you've been advising? That's George Boardman—an expert on shooting Palomino horses and pretty girls.'

My face is the color of a ruby safelight nowadays—the "tips" I gave Boardman were my interpretation of what he had written in MINICAM articles himself. Thank God, he's a mild-mannered man."

Los Angeles, Calif. EVERETT TODD.

* According to our mail, George "Pappy" Boardman is quite a favorite with West Coast



amateur photographers because of his willingness to help them solve camera problems. His illustration on page 25 of the August issue, incidentally, brought so many requests for another shot of the same model that we had Boardman's assistant oblige by shooting a picture especially for this column. The scared-looking person, we understand, is the maestro himself. He's camera shy!—Ed.

Short Course at Kent

Sirs:

I was very much interested in your recent article about the Kent University Short Course
(Continued on page 110)

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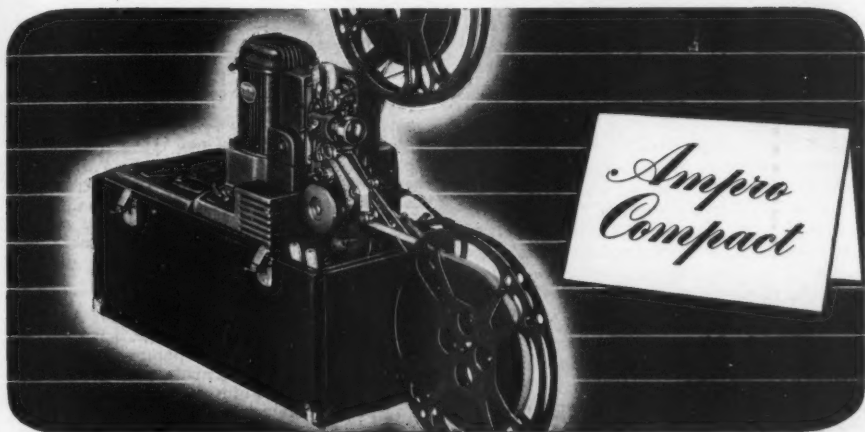
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amount of sale; rushed back to you with your finished prints, within 24
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**REVOLUTIONIZES 16mm. SOUND PROJECTION FOR
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The Ampro Compact has been built for those who need a portable, single-case quality projector at a popular price. It is a *basically new type* of portable projector which brings you:

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A complete full size 16mm. sound picture projection outfit—including projector, amplifier, detachable 8" speaker and cord, plus room for extra 400' reel and film—all in one portable case. Measures only 15" x 21½" x 9¾". Speaker can be instantly removed and set up near screen for best sound reproduction.

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The many Ampro quality features, tested in thousands of projectors over many years and through millions of performances, are fully maintained in this new Ampro Compact. Not a new untried unit—but rather an ingenious adaptation of a proven 16mm. sound projector. Unusually quiet-running. Delivers fine, enjoyable sound reproduction.

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PHOTO MARKETS



BY MAY SULLIVAN

Look, 511 Fifth Avenue, New York City. This magazine welcomes photographic contributions from all sources—professional and amateur. Picture sets should tell, insofar as possible, a complete story. Action photos, animals, are particularly in demand. Whenever possible contributors should be prepared to send negatives. Black-and-white preferred to color. Prefer color transparencies larger than 35mm size.

American Journal of Nursing, 1790 Broadway, New York, New York, buys technical action photos of nurses in all fields of nursing. Ordinary rate of payment is made upon acceptance.

Pan American Magazine, 1150 Avenue of the Americas, New York 19, New York, is in the market for scenic shots of Latin American countries, industrial or agricultural pictures of Latin America, and pictures of typical people in the Latin American Nations. Black-and-white only—no color required. Please include return postage.

School Management, 52 Vanderbilt Avenue, New York City 17. This publication can use good school human interest photos and pictures of attractive modern schools and school activities. Black-and-white only in size 8½ x 11. Payment is made upon acceptance of material at the rate of \$5.00 to \$10.00. Please include return postage.

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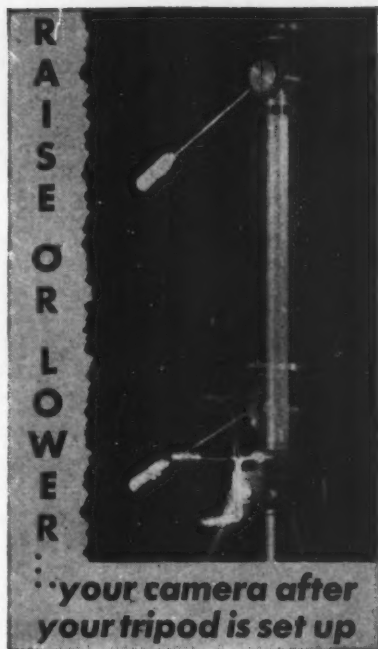
Collier's, 250 Park Avenue, New York 17, New York, invites you to submit pictures that are humanly appealing, humorous or dramatic. They must be strongly composed for instantaneous impact. *Collier's* intends to devote its cover to photographic slices of American life—of young people in striking story-telling situations against natural realistic backgrounds. Young men and women, children, animals and pets are high on the preferred list, but acceptable subject matter will be found in all avenues of American life, such as sports, holidays, modern living, etc. Transparencies smaller than $2\frac{1}{4}$ by $2\frac{1}{4}$ will not be acceptable. Send contributions to Bruce Downes, Photograph Editor, who says that *Collier's* will pay top prices.

New Century Leader, published by David C. Cook Publishing Company, Elgin, Illinois, wants photographs of human and family interest, rural life, or men at work. Pictures may be in size $2\frac{1}{2} \times 4\frac{1}{2}$ to 5×10 . Payment is made on acceptance of material at the rate of \$3.00 to \$5.00 each. Please include return postage with your contribution.

Sears, Roebuck & Company, Chicago, Illinois, is sponsoring a nation-wide snapshot contest offering \$10,000 in awards on local and national levels to amateur photographers. The contest will run from October 1 to November 15 of this year. During that six-week period photographers are invited to submit their entries to their local Sears store—either in person or by mail. At the end of the local judging the four top pictures will be sent to the national contest in Chicago to compete for seven grand national awards totaling \$1,000. Rules of the contest permit an unlimited number of black-and-white snapshots in any size up to 8 by 10 inches to be entered. The subject material may include any of the following: babies and children, young people and adults, scenes and still-life, animal life, etc. Each of the six weekly winners will be given an award of \$5 in merchandise at the store. Four well-known Hollywood cameramen are among the judges named to appraise the entries submitted to the national contest for the \$1,000 in cash awards. Grand first prize will be \$500; second, \$250; and third, \$150. Should you need additional information, please contact George Vidal, Publicity Director, Sears, Roebuck & Company, Chicago 7.

The Santa Fe Railway, Room 326 Railway Exchange Building, Chicago 4, Illinois, is continuing its photographic contest up to and including September 15. This is in connection with the Company's exhibit at their first Chicago Railroad Show now under way at Burnham Park. A lengthy announcement of this contest appeared in our September issue.

AND, speaking of contests, don't forget our own Color Cover Contest, which closes midnight, September 16, here in Cincinnati. Transparencies must be at least $2\frac{1}{4}$ inches in the shortest dimensions—larger transparencies preferred. Because of production difficulties, 35mm slides cannot be considered for covers. Entries must never have been published.



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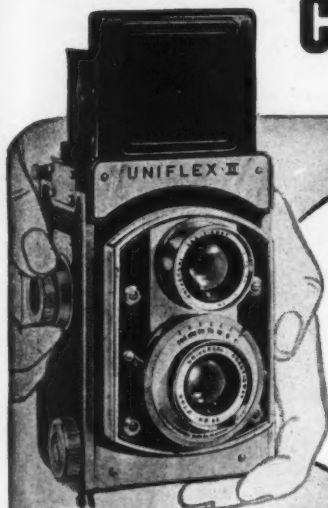
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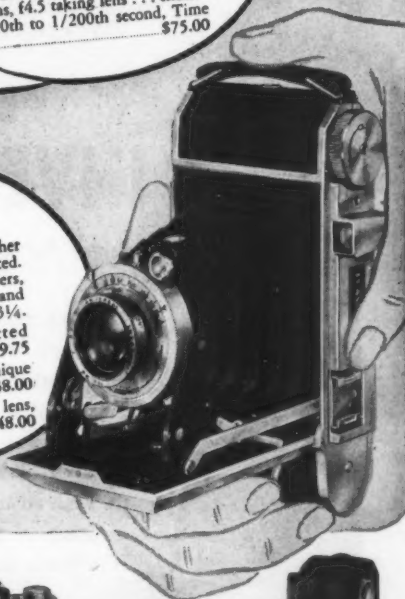
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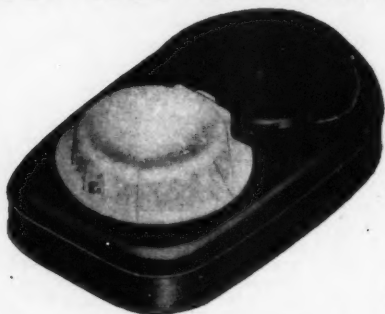
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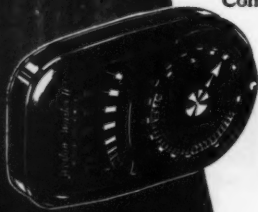


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an adapter for incident light measurements

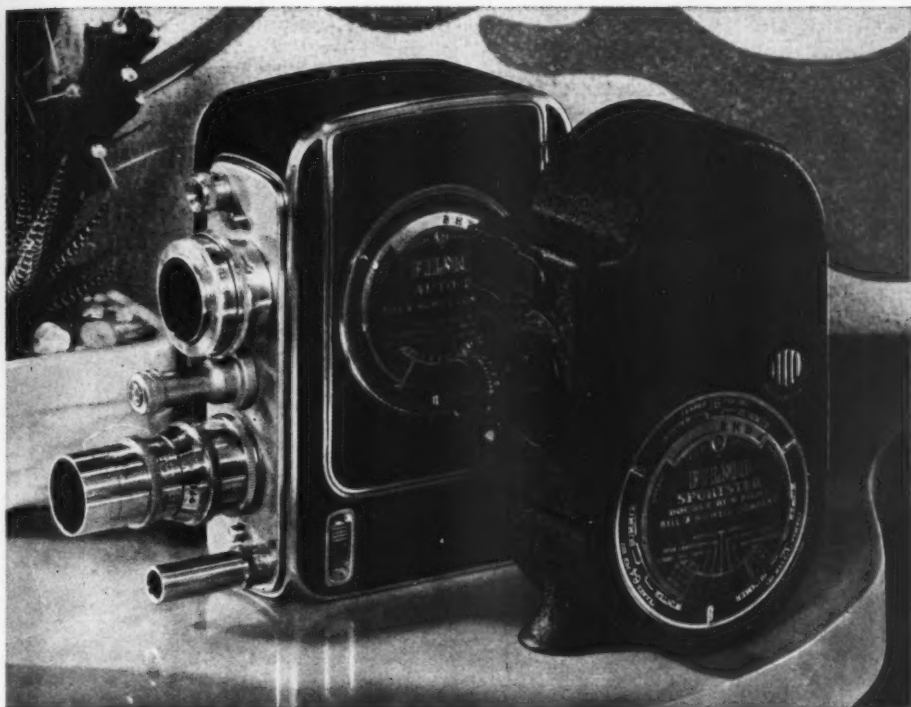
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This true-color picture of Mt. Shuksan, in the State of Washington, was made on 4x5 inch Ansco Color Film by Robert Bellile. The exposure was $\frac{1}{2}$ second at f32 in early afternoon sunlight.

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THE colors of nature are often the hard ones to catch truthfully on film!

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ridges, 120 or 620 rolls, sheet sizes, or 16mm movie spools. **Ansco, Binghamton, New York.** A Division of General Aniline & Film Corporation.

Ask for



HOW THE COVER WAS MADE

THIS MONTH'S cover was photographed by ultra-violet light at an Ice Follies show in Portland, Oregon. Here is Ray Atkeson's description of how the cover was made:

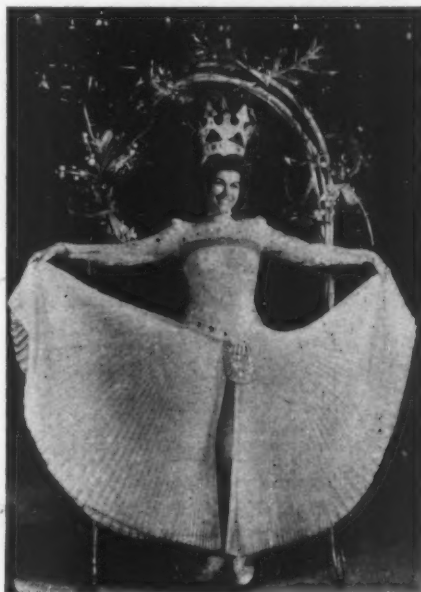
"The lighting used for the *Ice Follies*' strange 'black-light' number consisted of ten theatrical spots and a number of overhead floods, all equipped with black-light filters and directed upon the ice arena. While the show was in progress, I made a number of snapshots with a Bantam Special which, although striking and beautiful, checked with what I had previously learned while making ultra-violet shots on an assignment for *Colliers' Magazine*; namely, that when a scene flooded with ultra-violet light is shot on color film without a filter, the effects of make-up etc., are lost in the photo.

"In order to eliminate extraneous light so that only the fluorescent materials would register photographically, I decided to use a Wratten 2A filter on daylight Kodachrome. This decision automatically raised a problem in connection with exposure time, for whereas an unfiltered shot could be made in seconds or fractions thereof—a filtered shot called for an exposure of minutes. Exactly *how many* minutes could

be determined only by trial and error.

"Fortunately, the management of the show was as anxious as I was to see what could be done with ultra-violet photography, and they cooperated by assigning a member of the cast and several lighting technicians to assist me for some shots after the show. I neglected to obtain the name of the talented young lady who posed on skates for a two-minute exposure but without her patience and understanding of the problem, the shot would have been impossible. I must admit, too, that luck played a major part in obtaining the final shot because the 2A filter forced me to guess at the exposure time. The picture was made with a Speed Graphic camera equipped with a Zeiss Tessar 5¼" lens.

"I believe other MINICAM readers might get a kick out of shooting blacklight pictures without using a 2A filter. The results will be different, of course, but they are certain to be as interesting in their own right as a filtered shot. And as for the comparative grief in making them—there is no comparison!"



THE COVER picture was shot by ultra violet light. This is a comparison shot of the same girl made with ordinary flash equipment.



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use the minus time

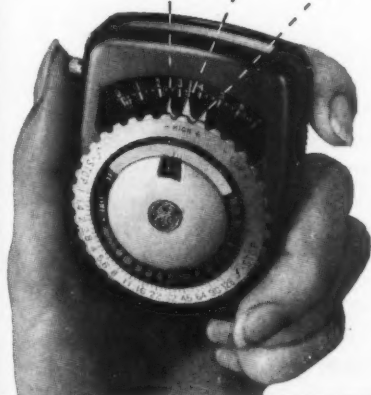


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use this time



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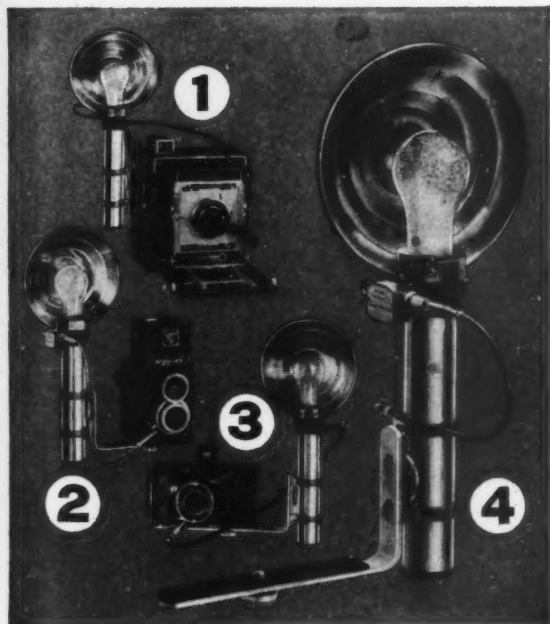
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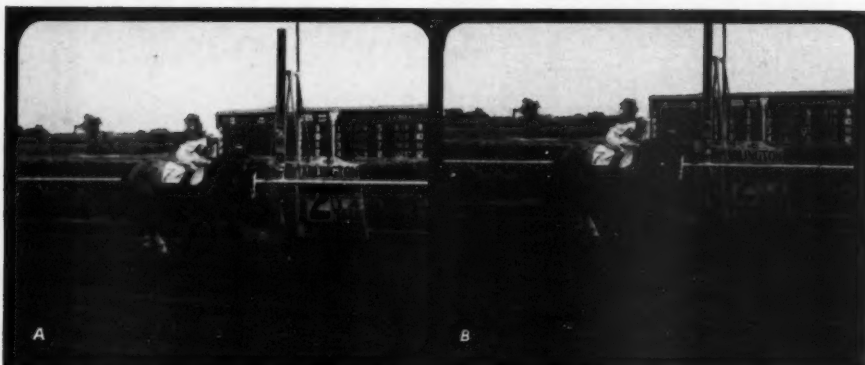
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*The CLARUS Performance Comparison Test was made by Arthur E. Haug, eminent freelance photographer for leading national publications and air lines . . . author of current pictorial best seller, *Chicago*. For complete details of this amazing test, write for free booklet, *Candid Camera Thrills with CLARUS*.



**Picture on right was taken with CLARUS, Model MS-35.

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PAUL K. PRATTE

Brooklyn Museum

BIG PRINTS

with a sparkle

BY KARL A. BAUMGAERTEL

THE DIFFERENCE in print quality between a good picture and an outstanding picture sometimes hinges upon a simple twist in processing technique that only a few photographers know about. Such procedures are carefully guarded and, being valuable in maintaining the user's prestige, are almost never divulged in print.

I know of one such procedure which, although far from being new, has almost been forgotten in recent years. Its chief value is to put sparkle into print quality—to restore some of the brilliance often seen while a print is wet, but which is lost when the print becomes dry. The same process is also useful for obtaining warm tones in a print or, if you prefer them, cold tones that have unusual richness.

This process consists of a variation of a formula for a chromium intensifier. The degree of intensification, though very moderate can be stepped up considerably when desired by a simple change. The solutions are easy to prepare and, since the measurements are not critical, do not require the use of scales if none are available. I will give the formulas first and then outline their use.

For the first solution, a bleach, mix the following:

Water	20 oz.
Potassium Bichromate	¼ oz.
Hydrochloric Acid (Tech)	1 oz.

The diluted acid is not harmful to the skin, but as with all photographic solutions it is just as well to keep your fingers out of it as much as possible. If you have no scales, buy the Bichromate in 1-oz.

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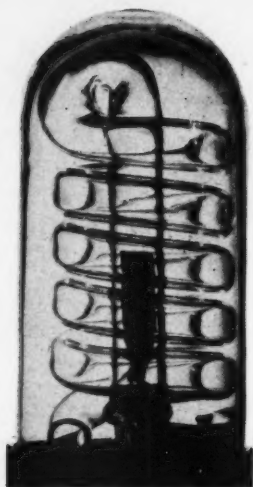
SUPERB print quality alone doesn't make a picture, but when good subject matter is given the benefit of expert processing, the picture is bound to sparkle. Note how the delicate gradations of tone between black and white have been retained in this beach scene by Andre de Dienes.

bottles, (available from your photo dealer or most chemical supply houses) divide it into four equal piles on a piece of clean paper and use one of the parts each time you mix a fresh solution. Be sure, however, to keep the unused Bichromate in a tightly closed bottle.

The degree of intensification depends upon the length of time the Bichromate has to work on the print; if considerable intensification is wanted, use twice as much Bichromate and only half as much

acid. The more Bichromate and the slower the bleaching action (less acid) the greater the degree of intensification, and vice versa. This solution keeps quite well in a corked dark bottle and can be used again and again until it loses its life. It can be replenished (only once is recommended) by the addition of one quarter of the amount of acid originally used. The formula with more Bichromate

(Continued on page 126)



XENON-GAS FILLED BULB

Speed light at 1/5000

THE BETS had been laid and tempers were at white heat. The disturbing question? "Does a trotting horse have all four feet off the ground at one time?"

To settle the bets, and douse the tempers of his California friends, Leland Stanford, the railroad magnate, hired an itinerant English photographer, one Eadweard Muybridge, to photograph a trotting horse. This was in 1872. With typical photographer's luck Muybridge's first trip out resulted in a darkroom filled with useless negatives. He had either missed the horse completely or ended up with shots of the mane or tail. Then, as now, it was a problem of timing. So Stanford called in one of his engineers, John Isaacs, to devise a timing system. The next time the horse ran, a battery of cameras were lined up along the course. There were special shutters operated electrically which enabled Muybridge to make the first series of speed shots.

The results were sensational, and proved that a trotting horse *did* have all four feet off the ground at one time. Muybridge was made. From that time on he photographed all kinds of creatures—elephants, deer, men and kangaroos.

But for practical purposes the picture-hungry public had to wait until 1931 to see the brilliant, practical pictures of Dr.

Harold E. Edgerton and his associates of the Massachusetts Institute of Technology. His gas-filled bulbs used for this motion freezing photography look like neon tubes. They produce a brilliant flash, brighter than sunlight, of extremely short duration and they can be used over and over again.

From a cumbersome assortment of electrical gear and lights, necessary in the first experimental pictures, we have made progress. Today you can sling a seven pound battery powered speedlight over your shoulders and walk out of a camera store and start making high speed pictures for less than \$100.

The Questions Photographers Ask

Q.—What do you mean by high-speed light?

A.—"High-speed light" is a flash of light of about 1/5,000 sec. duration, operating in synchronization with the camera shutter. Some commercial units go as

PIVOTING on a split-second this photograph of a skater has the speed and hair-splitting sharpness that only a speedlight could give. A 500 watt-second unit was used with 3 lights set high above the area used by the skater.

Photo by Hugo Gorski-Milwaukee Journal from
S-R Strobe

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slow as $1/2000$ sec. and more go up to $1/10,000$ sec.

Q.—What makes the flash such a short duration?

A.—Let's look at the outfit first. A high speed light unit contains two elements; a spiral tube averaging about 3 inches long containing a gas such as Xenon - - - -

Q.—What?

A.—Xenon is a native gas found in the atmosphere. There's one part to twenty million parts of air. If you want to buy some it will cost you about \$80 a litre (approximately a quart).

Q.—This 3-inch spiral tube then is filled with Xenon gas. Why?

A.—When a charge of several thousand volts passes through the tube, it - - - -

Q.—Who makes these bulbs?

A.—Amglo, General Electric and Sylvania, and they sell for \$14 to \$25. The tube lasts for 10,000 flashes up, at any rate the photographer should have grey hair by the time it wears out.

Q.—I suppose more bulbs are broken

THE ANALYTICAL POWER of the speedlight gave Spaulding this impact picture showing what happens to the tennis ball and the strings in an overhead smash.

Photo by Dr. Harold Edgerton



PEEPER'S LEAP

"WE WERE LIGHTING after-dinner cigarettes when my wife noticed a "peeper" frog on the outside of the dining room window pane. He'd set his table where the branches brush the house, and was busy gobbling up every insect attracted to the window by the lights inside. The Rolleiflex, a set of Proxars, and two speedlights did the rest.

"An unappetizing sight, the voracious little frog apparently clung to the glass pane by means of suction cups on the ends of his toes. He would wait quietly until a tempting bug fluttered close—then a lightning leap—and the bug was nothing but a few aimless writhings in the tree-frog's gullet.

"Speed lighting was the only way to freeze the extraordinary speed of the leap itself.

"I hooked up my Wilcox portable speedlight outfit, with one additional extension, flicked the switch 'ON,' and clamped two light units to a chair and a door jam. Each was about three feet from the frog and a rough 45 angle to the camera, one on each side. I fired them a few times while checking the Rollei ground-glass, and changed the angles of the light units slightly to get rid of flare reflections in the window pane.

"By slipping on the Proxar set, I was able to get a larger-than-normal image of the frog on the negative, with the result that the 11×14 print did not show the mushing-up of tones and details from 'over-enlarging' that often occurs when trying to picture tiny subjects.

The camera was loaded with SuperXX film, diaphragm set at f22, and the shutter at 100th sec. (The shutter speed is unimportant when shooting with speedlights against a dark background and in ordinary room-lighting. It's the $1/5000$ th sec. that takes the picture.) My wife shone a flashlight on the frog's white belly for my focusing, and I began exposing shot after shot, trying to capture that elusive leap.

"Our frog remained obligingly within the frame of one window pane. Small wonder—he must have eaten his weight in insects during the half-hour he modelled. But he had one big edge on me. He knew when he was going to jump. With the average human brain-to-hand reaction time being about one-tenth of a second, I found my opponent would grab a bug, and already be looking around for a second helping by the time I'd get around to pressing the button.

"I made twenty-three shots and knew I hadn't stopped him in mid-leap; but I was beginning to notice the little, different ways he had of moving his muscles and poising just before the leap. The coffee was getting cold and I was cramped. A fat moth clumped against the glass, and I got the 'peeper' frog."

—Joe Munroe

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ELECTRONIC FLASH EXPOSURE DATA

The assigned ASA speed ratings of emulsion materials are not applicable when a speedlight is used as the light source. This is due largely to the varying degrees of failure of the reciprocity law with various emulsions, and to the more favorable response of certain emulsions to the exceedingly high-peak lumen output of electronic flash lamps. Some of the lower resistance, self-ionizing type lamps exceed 50 million peak lumens. It is therefore necessary to assign special guide numbers to emulsions for speed light exposure.

The table below shows approximate guide numbers for various film groups. These guide numbers will permit the user to establish an approximate exposure for initial tests. They are based on the use of reflector arrangement of average efficiency.

The individual user should establish his own specific guide numbers, using the information shown as a starting point. Like any other exposure table the exact guide number set-up will depend on development procedure and materials, reflector efficiency, and other variables. The data below, however, are correct for average conditions.

The average low-cost portable electronic flash unit is light in weight, and somewhat low in energy input, usually ranging from 50 to 60 watt-seconds. The highly engineered models, however, pack a terrific punch, sometimes twice these figures, due to carefully balanced electrical characteristics and reflectors especially designed for use with electronic flash lamps.

EXPOSURE GUIDE NUMBERS FOR ELECTRONIC FLASH

Film Group No.	Watt-second rating of unit (usually given with instructions)									
	40	60	80	100	120	140	160	180	200	250
1	115	140	160	180	200	215	230	240	255	
2	95	115	135	150	165	180	190	200	210	
3	9.5	11.5	13.5	15	16.5	18	19	20	21	

Film Group 1

Isopan
Panchro-Press Type B
Tri-S Pan
Supreme
Plus-X

Film Group 2

Tri-X-Pan
Superpan Press
Verichrome
Plenachrome
Super XX

Film Group 3

Daylight type color materials

This data was based on hundreds of test exposures and densitometer measurements made by the Research Laboratories of the Amglo Corp. A wide range of equipment and developers were used.

Guide numbers for color film are based on the use of a CC15 color compensating filter for Daylight Kodachrome, and equivalent filters for other color materials.

The average portable unit sold complete is rated at approximately 60 watt-seconds. However, due to precise design of the modern speed light reflectors, (especially calculated to take advantage of the shape of the Xenon tube) the efficiency of the unit is considerably increased. When using these units, it is possible that the guide number used can be that corresponding 80 watt-seconds.

The manufacturer's watt-second rating of a lamp is dependent on its ability to handle energy input. The ratings given are conservative and energy input values twice those indicated are often used, although this results in diminished lamp life. This is particularly true if the flash is repeated very often. In cases where higher inputs than the lamp is designed for are going to be incorporated, it is advisable not to flash the lamp without at least a minute's time intervening. Several closely spaced flashes are quite practical, when necessary, but this procedure should not be repeated too long as the resulting heat and strain will weaken the bulb.

While electronic flash manufacturers usually supply watt-second ratings it is possible to calculate this from data on the electrical characteristics of the unit. Watt-second input is based on two factors, capacity and voltage. It is easily computed by multiplying the capacitance (MFD) by the voltage (kilovolts) squared, and dividing the product by two. As an example, a unit using 50 MFD and 2000 volts would have a watt-second input of:

$$\frac{50 \times 2^2}{2} = \frac{50 \times 4}{2} = \frac{200}{2} = 100 \text{ watt-seconds}$$

Flash duration can be approximated by using the factors of capacitance (MFD) and the average resistance during ionization. Multiplying the two together provides the answer in micro-seconds (millionths). One popular self-ionizing lamp, for instance has a resistance of 5 ohms when used with a capacitance of 30 MFD. Multiply 5 x 30 and you have a flash duration of 150 micro-seconds. In the voltage and capacity range, the color temperature of the light output will remain closely constant at 6500 degrees Kelvin. This value is close to optimum for daylight balanced film types.

by dropping than are exhausted by actual use?

A.—Yes, to date no one has heard of one wearing out; few have been returned as faulty.

Q.—In addition to this bulb—what else do you need to take speed light pictures?

A.—An electrical power-pack. . . .

Q.—Sounds like something a superman lightning bug carries—what does it do?

A.—The purpose of the power-pack is to supply the power that ionizes the Xenon in the spiral tube, so it gives off a flash of light. There are two kinds of power-pack—one is plugged into the AC circuit; the other gets its power from two batteries of two volts each, carried in the unit itself.

Q.—What do they weigh?

A.—The AC unit weighs from 10 to 35 pounds and the battery units from 5 to 12 pounds including the batteries. These are both portable.

Q.—All day portable?

A.—That is what photographers get paid for.

Q.—I imagine both the tubes and the power-pack are delicate.

A.—The tubes won't bounce, but, they are as durable as an ordinary electric light. The power-pack itself, is about as tender as an ordinary radio.

Q.—Is the power-pack unit like a radio?

A.—Yes. The circuit follows that of an ordinary radio. It contains a transformer which steps up the 110 volts line current to approximately 1600 volts AC. The current then goes through 1 or 2 rectifying tubes which change the alternating current to direct current and increase it to 2,000 volts or more. This current is then stored in a condenser.

Q.—What is a condenser?

A.—You could compare the condenser to a water tank only in this case electrical energy is stored. This stored energy is expressed in "watt-seconds."

Q.—How is the current released from the "storage tank," or rather what you call a condenser?

A.—The problem is to let the watt-second energy pulse into the Xenon tube.



ONE 60 watt-second speedlight was used to stop this shower. Photo by Jos Munroe



"BASKETBALL BALLET" was made with a speedlight attached to camera.

Bob Long—Amglo

BALL-SNATCHER was caught with a portable speedlight. Photo by M. Giessler from Amglo





EXTREME CRISPNESS is a quality that speedlight gives to negatives. In this Rolleiflex shot of Joe E. Lewis notice the extreme depth of focus from the back of the ear to the hand. Photo by Robbins—True Mag. from Anglo



◀ **TO MAKE** this 4x5 Graphic shot of a bird being fed with an eyedropper a 150 watt-second unit was divided between two lights. Photo by Sochurek—Milwaukee Journal from S-R Strobe

Q.—How is this done?

A.—There are two methods—one type of Xenon tube requires a high voltage current to be passed through it, and to flash it an even higher voltage “pulse” is passed through it. The extra pulse comes from a “trigger” tube. This type of speedlight works with a “no-delay” shutter synchronizer only.

The other method uses the open spiral, self-ionizing Xenon lamp. Flashed by a relay connected in series, these lamps do not require the usual 10,000 to 15,000 volts for triggering. The lamp cable stays free of high voltage except for 1/10,000 second flash time. These tubes are very easy to synchronize to regular flash bulb synchronizers. They are used often in portable units because they pack more punch in lighter weight.

Q.—Then this outfit will take pictures at 1/5,000th. sec. What good is it?

A.—The speed light will stop action that the flash bulb couldn't begin to stop.

Q.—For instance?

A.—A high speed light will stop the action of an ordinary house electric fan. A flash bulb will not. A speed light will stop the action of a drop of milk falling into a pail of milk. Flash bulbs will not, unless you are working with a 1/1000 of a second focal plane shutter.

Q.—I don't understand?

A.—There are two ways to stop fast action. Bright light with a very fast shutter, or any kind of shutter plus a brilliant light that goes on and off in a split second.

Q.—Could I freeze the blades of an electric fan using a box camera and a speed light?

A.—Sure. Open the shutter on “Time” in subdued light; fire the speed light, and close the shutter.

Q.—Then the first advantage of the speed light is that it will stop action that a flash bulb would not stop. Tell me more?

A.—In terms of actually taking pictures, this super-fast light means you'll

get no more fuzzyness due to "hand-held movement" on indoor shots. A tripod isn't necessary. The speedlight increases the photographer's freedom of movement because it removes both the variable of shutter speed, and the need for that old standby "Hold it."

Q.—Are there other advantages?

A.—A speed light can be flashed for more than 10,000 times and a flash bulb can be used only once. No burned out, hot, bulbs to change. No hunting around for a waste basket or a secluded corner to dump the used bulbs. There's an economy factor here, too. While no one claims the speed light will eliminate the need to buy flashbulbs, it has been estimated that, for example, an amateur who likes to take a lot of flash pictures can pay for a speed light outfit in a year out of flashbulb savings.

Q.—Any more advantages?

A.—Yes, there is one additional advantage that every photographer will appreciate who knows the limitations and frustration of all mechanical equipment. The speed light delivers to the photographer an unvarying amount of light on each shot. The photographer knows exactly what he will get each time.

Q.—I thought this was true of flash bulbs also.

A.—Yes, it is true of the flash bulb, but the shutter of the camera will vary considerably. If you take any ten cameras that are in daily use and shoot each one at 1/100 second you will get a considerable variation in shutter operation. This does not interfere with your results when you use a speedlight, because the light itself lasts only 1/5000 of a second, so it does not matter if the shutter is a little faulty as long as shutter is open at time of light flashing. The speed light is what stops the

COLOR SET-UP used by the Milwaukee Journal to shoot color on Kodachrome. There was 9000 watt-seconds of light; the aperture was F:6.3. Five speedlights were spaced around the players, each approximately 20 feet distant. *Photo from S-R Strobe*



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LIKE A limpid stream, the skim milk seems to curl down to these farm cats. Here a single speedlight on a Wilcox Unit has been balanced with the daylight. *Photo by Joe Munros*



action—the speed of the shutter is of no consequence.

Q.—Is this always true?

A.—Only when an auxiliary light does not enter into the picture.

Q.—There it is! Always a “bug” in the works somewhere. Better give me that again.

A.—The only thing the speed light can be depended upon to give you is constant lighting if it is the only source of lighting in the entire picture. If you are taking a moving object outdoors using a speed light at F:4.5 at 1/100 of a second you may get one image from the speed light, and a ghost image made by the light of the sun.

Q.—Then would you use the speed light out doors?

A.—You can use it outdoors on moving objects when you have a fast enough camera shutter speed to stop the action. Or if the light is very dim you are all right, for then the speed light is the main source of light. Or if you can move up close to your subject so that you can use a small F stop, your lighting is mostly from the speed light.

Q.—How about using the speed light indoors at a boxing ring when the ring is lit by very powerful lights?

A.—Usually a photograph made at the ringside, under boxing lights at F 4.5 1/100 second will give you a ghost image. But stop down to F:8 and get in close to the boxers—say about 15 feet away—you can use the speed light and escape a ghost image.

(Continued on page 116)



CHARCOAL-DRAWING effect of this print from the sharp negative, below left, was obtained by making a large, fully exposed blow-up on matte paper. You can make any negative grainy by deliberately overexposing it slightly and developing it in a high contrast developer such as D 72 or D 11.

A STRAIGHT, SHARP print from a correctly exposed negative, below left. The center shot was made under the same conditions but dipped in hot water after washing, to cause the reticulation. You may get a mild version of reticulation by having 10 degrees or more difference in developing, fixing and washing temperatures. The effect shown on the right was obtained by using a Duto screen.

GRAIN

isn't always bad

IN 1937 the anti-grain feeling in photography was so intense that many a good prints never saw the light of day, but instead was doomed to remain a negative forever. If the texture of grain was visible in an 11 by 14 inch blow-up the technical pride of the photographer forbid him from going further with it.

Meanwhile, the press photographers were going their own carefree way, dunking negatives for a couple of minutes in a hot soup, often having a print in 10 minutes. They were immune to any criticism, from the standpoint of grain, for the coarse half-tone screen used in printing the pictures wiped out grain along with a great deal of other detail, in the final result. The news angle was there and so was the action. The pictures did their job, and well.

It took the war to cure photographers of their "grainitis." We became aware of the *subject matter* of the photograph; Normandy Beach-head shots and gun camera blow-ups that looked as if they'd been sand-blasted became acceptable.

Grain, reticulation and soft focus are specialized photographic techniques; once we know how to control them they can be put to work to make fine photographs. That we have grain unavoidably, on a negative, is no reason to throw it away. Try it for its subject matter, as a picture.



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AN AFFECTIONATE FAREWELL of two girls at the Paris bordello *Le Sphinx* the night before it was closed, to be made into a student's residence club. A grain conscious photographer might never have printed this social document showing a rare moment of consolation. It was made with a 35-mm camera on fast pan film by the natural mazda light.

Photo by E. Kammernan-Pis

October Pictures

by Thomas Bouchard

*I never saw the man who looked
With such a wistful eye
Upon that little tent of blue
Which prisoners call the sky.*

Oscar Wilde



THE MODEL'S BACK

by Andre De Dienes



ted

ar Wilde



TREE NYMPH

by Andre De Dienes

DOUBLE PRINTING of two negatives: a statue and a woodland scene, enhances the statue's dreamy quality.



De Dienes

THE LONG ROAD HOME

by Knopf-Pix



RUSTLE OF AUTUMN

by Gjon Mili—Brooklyn Museum



"MY NAME IS JENNIE"

by Robin Carson



MANHATTAN UNDERGROUND

By Edw. Burks—FPG

FRED LOVES RITA

By Bernard Cole





COLUMBUS SQUARE

By Fred Stein

*The monolith honoring Columbus at 57th St., New York City,
is now dwarfed by the overlapping canopies of advertising.*

**It's fun to earn money
with your camera**

Vegetable Faces

BY ANNE J. ANTHONY

DOES the red, puffy face of the bartender at the local bistro remind you of a tomato with eyes? Or when you hold a green pepper a certain way does it take on the features of the cute young thing at the cigar counter of the corner drugstore? Hold it at another angle and your mother-in-law is liable to pop out at you!

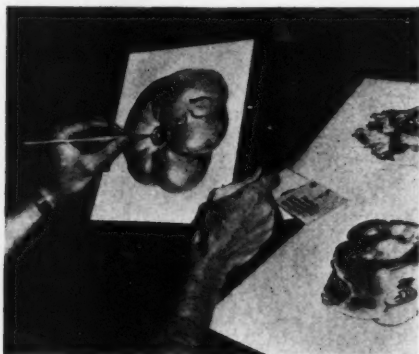


Fig. 1



Fig. 2

With a minimum of materials and a dash of imagination you can discover a wealth of possibilities in vegetable faces. And if you are looking for a way to help make your photographic hobby pay its own freight, this is like finding money. Sell photographic vegetable faces to fruit and vegetables stores, to produce departments in chain grocery stores, and to ad agencies who are running campaigns for various kinds of grower's produce. Or with a few samples to show, call on delicatessen owners, cafe operators, open-air street markets, or produce wholesalers. Whoever sells vegetables either fresh, or prepared for consumption, is a cash prospect. Beyond that, photographic vegetable faces make appealing home decorations that can either be sold or used as gifts.

A camera, a couple of lights, an enlarger, and a few inexpensive house tools are all that are needed for making vegetable faces. The first step is to photograph the tomato, egg plant, squash, or whatever other vegetable you have selected to experiment with. Use a light background behind the vegetable and avoid harsh cross shadows. The main thing is to choose a camera angle that accentuates the natural bulges and hollows of the subject. These bulges and hollows, as interpreted by the camera, are what give your subject "character."

Make several 8 x 10 enlargements of each negative you expose on single-weight matte paper. When the prints are flat and

(Continued on page 112)

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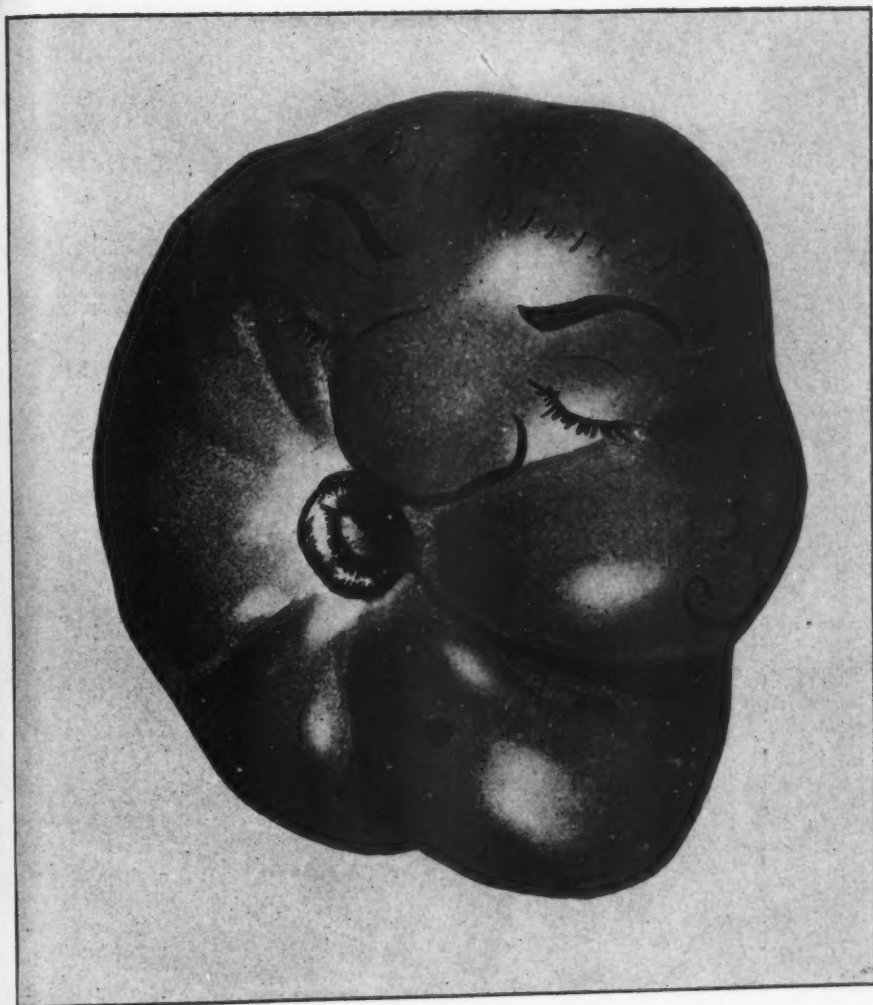


Fig. 3

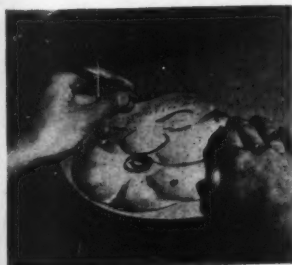


Fig. 4



Fig. 5







The Pro Selects His Best

A selection of photographs made by the members of the Society of Magazine Photographers from their forthcoming book, "Photo-Graphic '49".

"YOUNG MAN," said the editor gruffly, "make sure you bring back good sharp pictures on this story."

"Yes, sir!" said the photographer, fishing up an answer he was sure was good for a laugh. "Don't you give it another thought. I'm using Eastman's special Sharp Film today."

"All right," the editor replied, turning back to his handbook on photography, "that's fine."

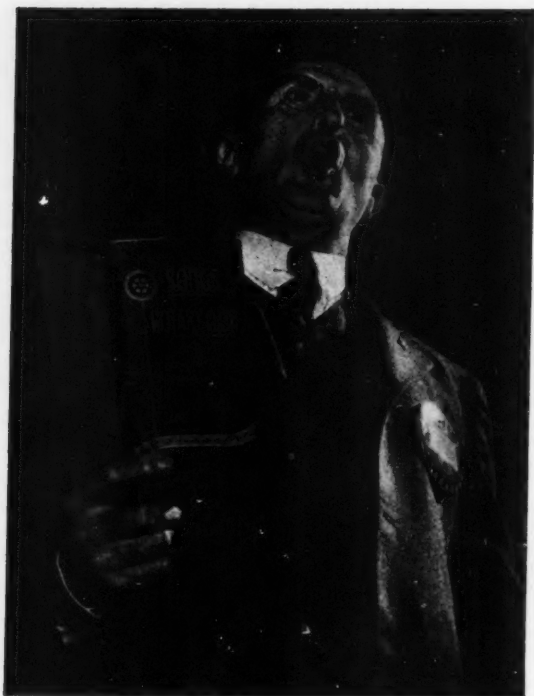
From time immemorial, editors have been accused of all the varieties of stupidity in the book. Magazine photographers bite the hand that feeds them whenever the opportunity arises. The photographer hasn't looked into ground glass who doesn't have his favorite anecdote about what this preposterous editor said to him and what he said to this editor.

For instance, there's the famous war correspondent who was risking life and limb weekly to cover the Pacific war. As a follow-up to one particularly dangerous set of pictures, he got the following cable

TREE, CENTRAL PARK

ERICH KASTAN

IT WAS A RARE DAY of unexpected snow that lured the photographer into the park from his usual studio-to-lunch path. He took his Rolleiflex with him, "just for the heck of it." Exposure was 1/25 at f 11; the film happened to be Superpan Supreme; K-2 filter.



MIDDLETOWN

This photograph was actually made in Middletown—Ohio. Rotarians said it expressed their good fellowship; others thought it a commentary. Rolleiflex; two #22 flash; 1/250 at f 22; Super XX film.

IKE VERN

from the home office: NEXT TIME YOU
MAKE A LANDING TRY TO GET MORE LIGHT.

Magazine Photography is New

Some fifty years ago magazines were “using” photographs in a haphazard fashion. Pictures seemed to have no other function than to prove that what some part of the text said was true.

It was not until the 1930's that editors began to pay somewhere near as close attention to editing their photographs as they did their text material. Even then, the photographs remained stranded and apologetic, a slightly lower class art.

However, with the advent of the picture magazine, specifically, *Life*, in 1936, and the others soon afterwards, a demand was created for significant related pictures. The overwhelming publishing victory of pic-

torial journalism gave photographers a hot foot.

Editors soon found that getting the kind of photographs they wanted involved hiring photographers who were expert at making them. This necessity drew from other fields a corps of men and women who were capable of creating stories in pictures and of dramatizing editorial concepts and who were as specialized—or as versatile—in their various talents as the magazine writers. A new profession was born.

Soon other facets were cut. The fine photographers driven to this country by the Fascist strangulation of freedom in Europe brought with them a greater consciousness of the value of social comment photography. The public became picture-

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GREEK CHILDREN, CRETE

MYRON EHRENBURG



GAMBLER, LAS VEGAS

A detail captured in 1/200 of a second, makes a strong social commentary. Patience coupled with an alert sensitivity caught a dynamic emotional event and told a whole story. Speed Graphic with 127mm Ektar; f 11; Super XX; #5 flashbulb.

ARTHUR ROTHSTEIN

wise. More and more, stories were allowed to stand independently, without the crutch of text. The hidebound tradition which forced an editor to caption a picture of a man riding a horse, "This is a man riding a horse" gave way. Gradually the concept that the written word can embroider the photograph, instead of the reverse, was accepted.

And the magazine photographer—with his little reflex camera, imagination, ability to dramatize editorial ideas and to bring back exciting picture stories where the

nonphotographic eye would see nothing happening—is a new kind of interpreter of life who takes his place with the writer, the reporter, and the painter.

He records facts, spins fancies, and portrays beauty.

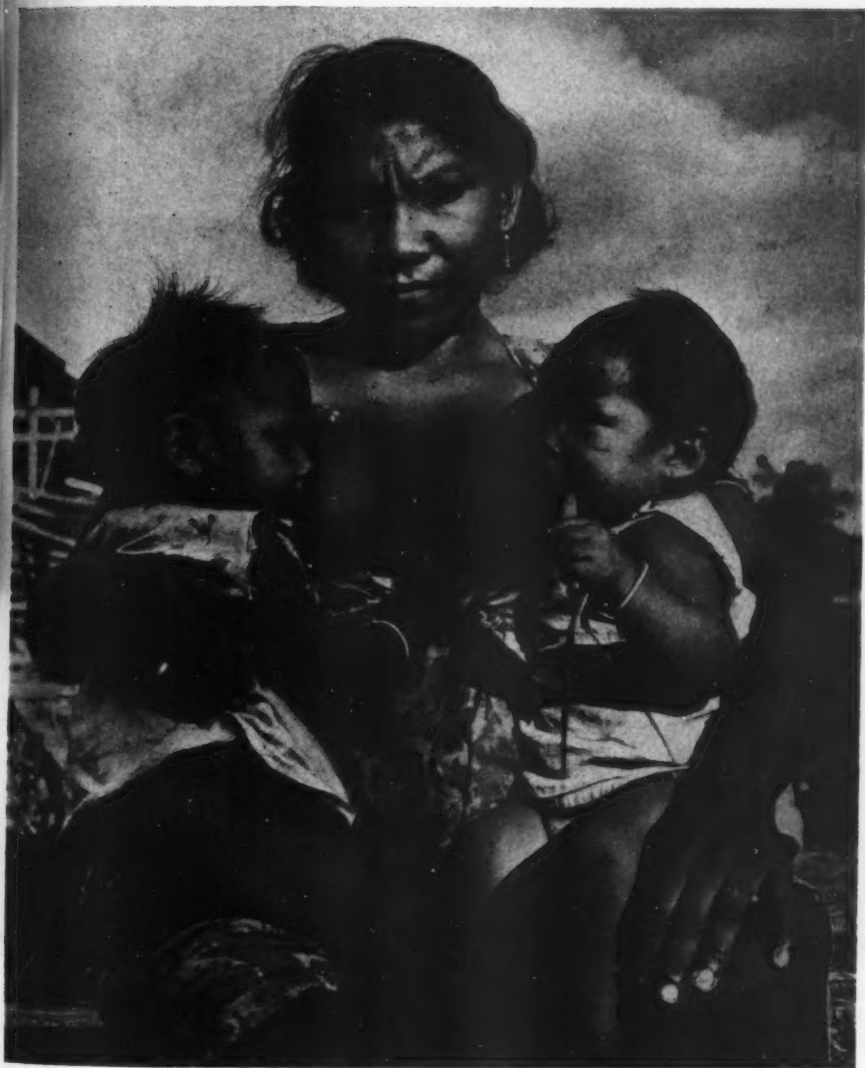
The Boys Got Together

Three years ago those of this new profession of magazine photography became sufficiently well defined and self conscious to form the American Society of Magazine Photographers. The Society today

"When I first saw this, in Surinam, the group was in deep shade. By the time I got them moved, one little girl had got her fill and was fascinated by the camera. The other kept throwing me mad looks. There was one instant when both were absorbed in their job." Rolleiflex; 1/100 at f 11.

BUSY ARAWAK FAMILY

EARL LEAF

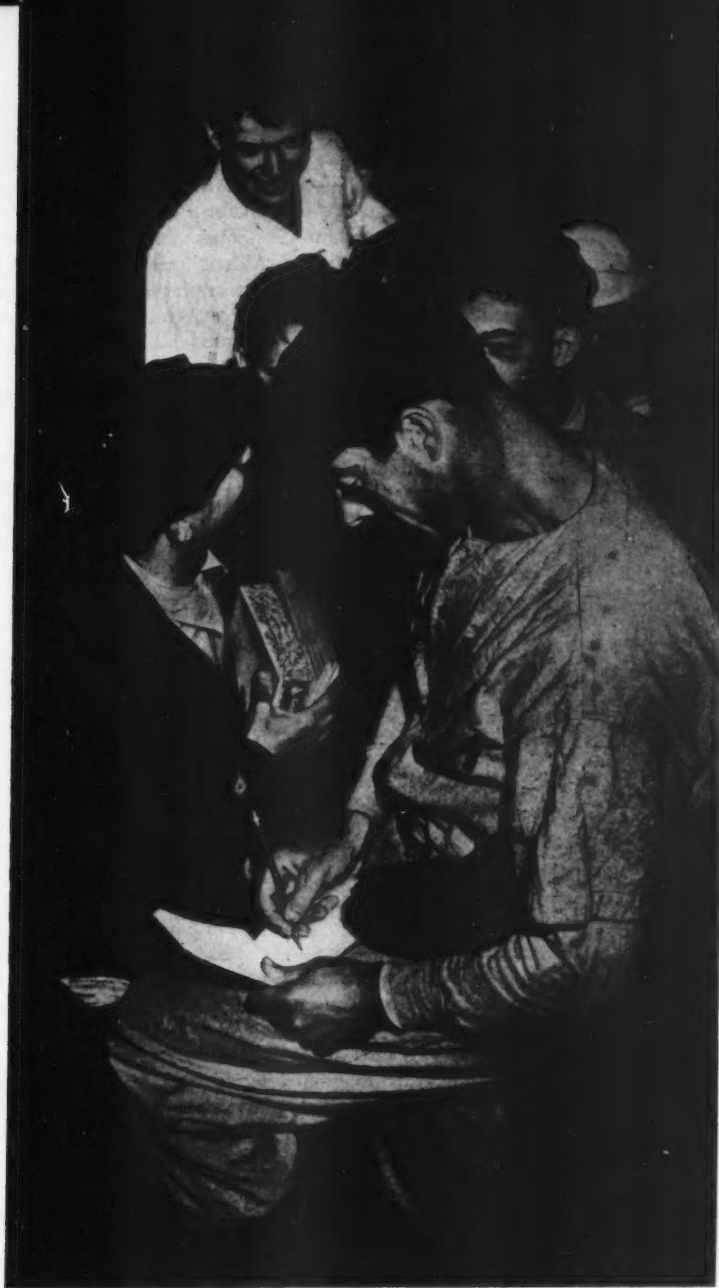




MIDTOWN MISHAP

TED BURROWS

Part of one of those projects a photographer never completes; in this case a series of pictures of the things you see in back windows. Burke & James Press, with f 4.5 Ektar; 1/50 at f 11; Super XX.



DiMAG

GABRIEL BENZUR

"DiMag is neither a camera-hound nor lens-shy. Get him best while doing something—batting, autographing." Rolleiflex; 1/250 at f 11; Superpan.

has a membership of two hundred twenty-five out of an estimated three hundred who derive their incomes from editorial work for national magazines. The purpose of the Society is to build the prestige of the profession in the public's somewhat jaundiced eye, and their first collected public showing of "best work" will be published next month under the title of "Photo-Graphic '49."

Often forgotten by the public and the amateur photographer are the sad facts that a professional must shoot, rested or tired, well or sick, in the mood or not. He must shoot subjects in which he is not interested as well as those which appeal to him. It means being nice to nasty people and being firm to nice people. It means being editor, prop man, actor, scenario writer, world traveler, and constant public relations man.

Then too, there is the preposterous circumstances that the professional must, in the course of the year, shoot the same picture over a hundred times and make it look different each time. *Colliers* may assign him a story which calls for a picture of a real estate man talking to a client over a desk. The next day, for the *Post*, he may have to shoot a banker talking over his desk to a G.I. And in a week, a union leader talking to his assistant or a government official being interviewed by the press. The elements are the same—two men and a desk—but the pictures must be different, and it's up to the man behind the camera.

He must travel everywhere, lose sleep, eat on the run and yet keep his imagination alert, his critical senses active for each job as it comes. He must, like a movie director, plead and act and talk to keep the family group from leering frozenly into the lens. He must keep the kiddies from snatching the hot bulbs and he must, for the thousandths time, explain why he's carrying such a "little camera" instead of one of those big professional-looking things the local newspaperman has.

He must play petty politics in small towns and avoid being sold a bill of press-agency goods in big ones. And with all

this on his mind, he must take better pictures than the man who, after a good lunch and a nap, wanders down the Old Mill Road after a snowfall and gives his all for a salon print.

They have model trouble: Nelson Morris found just the bewhiskered, grimy old salt he wanted as a subject for a fishing story. While he was sitting up on deck, his model disappeared below. Five minutes later he reappeared proudly decked in a clean shirt and minus every whisker.

Is There Any Money in It?

How does the professional stack up economically and professionally? Outside of thirty-five who work for *Life* and fourteen for *Look*, only a handful are on the staff of magazines. Probably ninety-eight per cent of magazine work is done on assignment, with the magazine committing itself in advance.

Speculation, or shooting pictures and then submitting them for acceptance or rejection, is frowned upon by almost all professionals as a danger to standards, although no photographer will pass up a good story happening under his nose simply because no editor has assigned it. Occasionally, also, a photographer will do a story on his own hook because he knows that no editor will be able to visualize its potentialities in advance.

Most of the Society's free-lance men work through an agency which, for a very healthy slice of the take, sells their talent to magazines, routes their assignments, does their darkroom work and procures their working materials. The agencies are comparable to the more modest ten percenter who handles a free lance writer.

Since the profession is most closely allied in structure with magazine writing, it may most easily be compared with it. Percentage-wise, there are fewer magazine photographers starving, but by the same token, there are fewer wealthy men. Magazine photography pays anywhere from one hundred dollars a week to fifty thousand dollars a year. The rate for the average journalistic photographer is one hundred

(Continued on page 145)

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HILLS AND SEA . . . The softly rounded hills, the back-lighted sea stretching out to the rim of the world, the feeling of tremendous space (how small the horses; how tiny the ship!) . . . here is a "shot" to inspire the worker in black-and-white to discover for himself the satisfaction and rewards of an excursion into color.

Kodak color includes Kodachrome Film for most miniature, sheet-film, and home-movie cameras . . . Kodacolor Film for most roll-film cameras . . . Kodak Ektachrome Film for processing in your own darkroom.

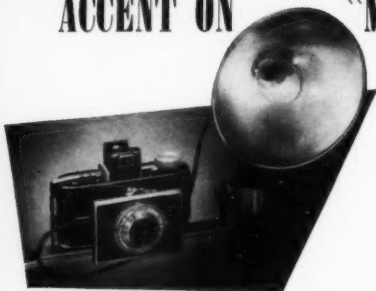
It's Kodak for Color

Kodak

BULLETINS

NEWS OF KODAK PLANS AND PRODUCTS

ACCENT ON "MINIATURE"



Basic instrument is a Kodak miniature camera, such as the Kodak Flash Bantam f/4.5 Camera (above, with accessory Kodak Flashholder) or a Kodak 35 f/3.5 Camera, Range Finder Model (see back covers of most October photo magazines).

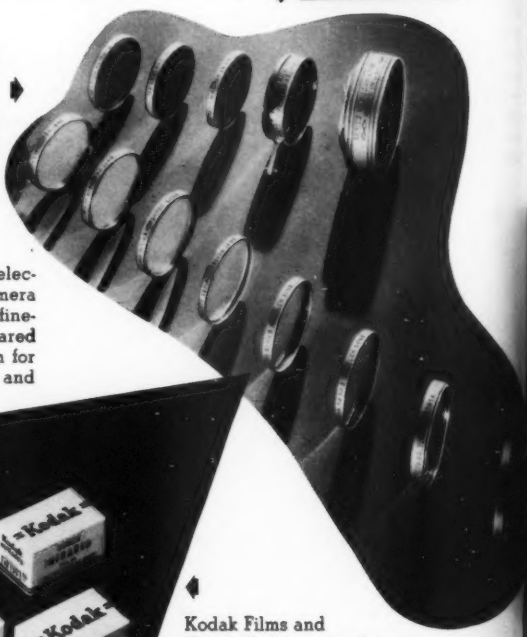
COMPACT CAMERAS... tiny needle-sharp negatives and full-color transparencies... imposing salon-size enlargements... huge screen pictures projected in full, rich color... fast lenses which permit snapshot exposures under a wide range of lighting conditions... workable depth of field even at high apertures... extremely wide range of choice in black-and-white film materials... full-color films for daylight, photo-flood, or photoflash... operating refinements and conveniences rarely found on large cameras...

That's miniature-camera photography—a field of endless fascination for amateur and "pro."

For flood shots (black-and-white or color) a Kodak Vari-Beam Standlight offers valuable aid.

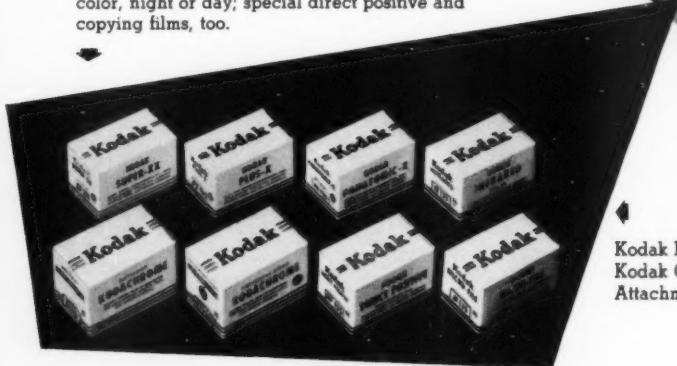


Kodak Combination Lens Attachments provide not only a wide choice of Kodak Wratten Filters—but also filters for Kodachrome Film, Kodak Portra Lenses for close-up work, Kodak Lens Hoods, and Kodak Pola-Screens—in a size range to fit every popular miniature-camera model.

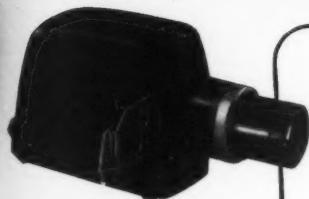


KODAK FILMS

These Kodak 135 Films suggest the wide selection of materials for the miniature-camera owner: super-speed films for night shots, fine-grained films for huge enlargements, infrared for spectacular scenes, Kodachrome Film for color, night or day; special direct positive and copying films, too.



Kodak Films and Kodak Combination Lens Attachments make natural working team.

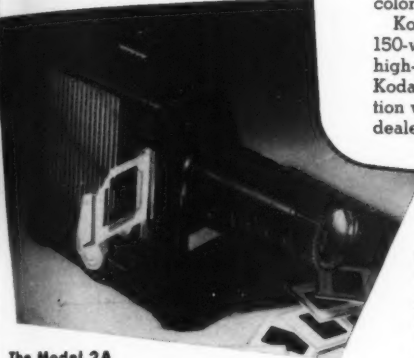


Kodaslide Projector, Model 1A

FOR SCREEN PROJECTION

HAPPY combination for full-color photography is a Kodak miniature camera and Kodachrome Film. With the simplicity of black-and-white, this film-and-camera team yields richly detailed transparencies in full color—for screen projection to imposing size, or for full-color prints.

Kodak makes many projection aids—the capable 150-watt Kodaslide Projector 1A, the popular 2A, the high-powered Kodaslide Projector, Master Model; the Kodaslide Changer for smooth semiautomatic projection with the 1A and 2A; and others. Ask your Kodak dealer to show them to you.



The Model 2A

Kodaslide Projector, Master Model

1000-watt, power-cooled, choice of five Lumenized lenses to cover every projection situation. An instrument of masterful performance, for those who demand the best.

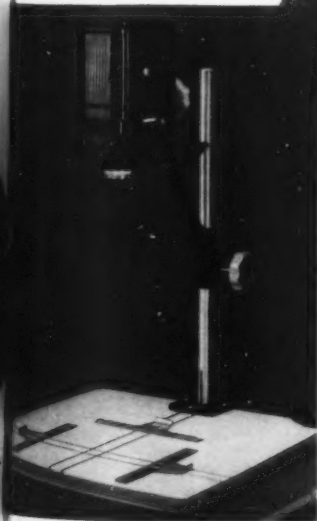


FOR FINE PRINTS

Versatile Kodak contact printers, brilliantly engineered enlargers with highly corrected Kodak enlarging lenses, and Kodak sensitized papers in a great variety of types, surfaces, sizes, and speeds—these spell superior prints from your miniature negatives. Here are the enlarger and contact printer you may well choose.



Printer also accepts large negatives—up to $3\frac{1}{4} \times 5\frac{1}{2}$ and 4×5 inches.



The sturdy, able Kodak All-Metal Printer, Model 3, has special guides for 35mm. film and 35mm. paper, for making strip prints and black-and-white positives for projection.

For compactness, the Kodak Portable Miniature Enlarger is a perfect design. It accepts 35mm. and Kodak Bantam negatives; has a triple condenser illuminating system, a choice of Kodak Ektar and Ektanon lenses, and projects to nine diameters on the baseboard (more when turned to floor or wall).

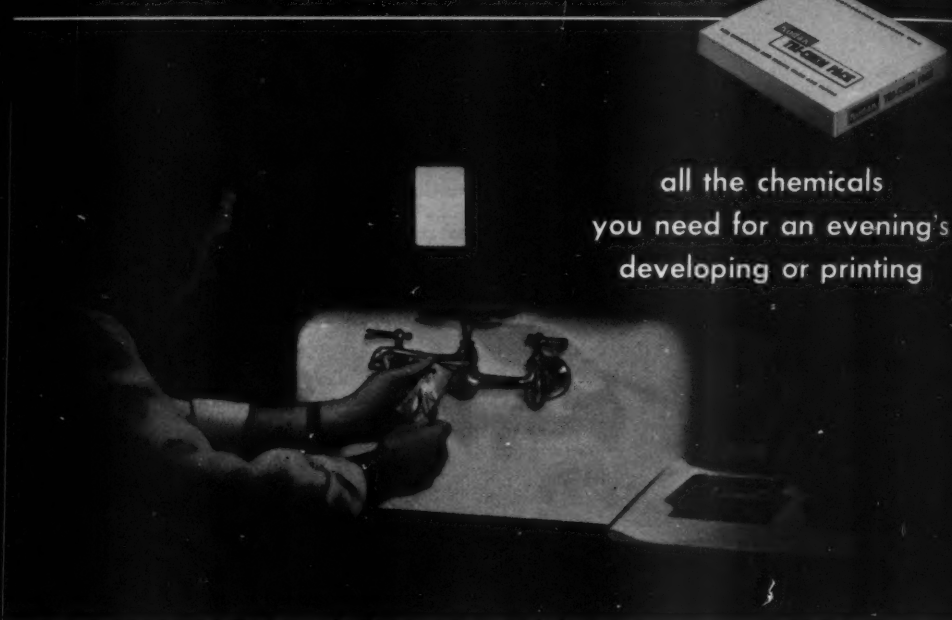
See your Kodak dealer

KODAK products are sold through Kodak dealers, any of whom will be glad to complete descriptions of Kodak products which are mentioned in these pages. Usually, too, they will give you opportunity for firsthand inspection of the advertised items.

In matters of general photographic information your Kodak dealer will be found to be well and soundly informed.

Kodak

Now—in one small kit...



all the chemicals
you need for an evening's
developing or printing

Kodak Tri-Chem Pack saves time, saves trouble, saves chemicals. It's especially convenient if you develop and print in your kitchen or bathroom. You make what you use; use what you make; no surplus to bottle and store. And you can depend on uniform results—with fresh, new chemicals every time.

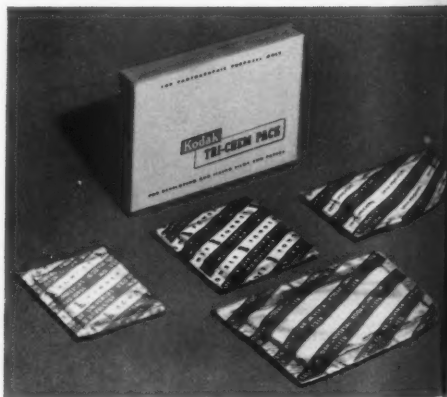
Each Kodak Tri-Chem Pack makes 8 ounces of developer, 8 ounces of stop bath, 8 ounces of fixer . . . enough to process two rolls of 620 film, or fifty $2\frac{1}{4} \times 3\frac{1}{2}$ prints, or equivalents.

Mixing's quick and easy. Tear off corners of packets and pour contents into prescribed amounts of water. (Detailed instructions with each kit.)

**EASTMAN KODAK COMPANY
ROCHESTER 4, N. Y.**

"KODAK" IS A TRADE-MARK

Kodak



Each Kodak Tri-Chem Pack contains: Kodak Universal M-Q Developer; Kodak Universal Stop Bath with Indicator; Kodak Universal Fixer—all in handy foil packets. Price, 20 cents.

Price subject to change without notice

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How to build a Twinkle-timer

By Phillips St Claire

IF A CYCLOPS straight out of Homer would let you wire him with electricity so that the single eye in the center of his forehead would flash on and off at regular intervals, he might make a novel darkroom timer. For a couple of millennia, however, there has been such a shortage of Cyclops that you may find it handier to build a soupcan-and-gimmick timer in an hour or so at a cost of about \$1.00. I call mine a "twinkle-timer" because it has a ruby "Cyclops" eye in the center that blinks on and off every second, and by counting the flashes I can expose a sheet of printing paper for any length of time desired.

The heart of the timer is a simple

electronic device called a "flasher." This is the same sort of unit that is used to make Christmas tree lights flash on and off. If you don't already have a flasher, you can buy one at any hardware or electrical equipment store for 50c or less. Although flashers are fairly consistent, current changes and the wattage of the bulb used will determine the timing of the flashes. I have found that a $7\frac{1}{2}$ watt red darkroom bulb averages 60 flashes per minute and the variables are never more than a few seconds one way or the other. For practical purposes, the timing is perfect.

Other parts of the timer consist of a small soup can for a housing, a socket,

(Continued on page 124)

Kodak
Universal
20 cents.

notice



1001 LIGHTS IN CHICAGO

Shoot pictures at midnight

BY E. M. FEATHERS

WITH THE SETTING of the sun, the world changes its face. Skyscrapers become serrated fangs against the skyline, aloof from the slums that have melted into their feet. A statue, uninspiring by day, appears boldly dramatic under flood-

lights. But while the main arteries become maelstroms of light and carnivals of sound, two blocks away a yellow streetlight, shining through a fire escape, places bars of shadow across the windows of a tenement house with an ironic symbolism that



BILL KNEFEL

for the most part goes unnoticed.

In every hamlet, every moonlit countryside, similar transformations take place each night. Seldom, however, are the interpretative effects of a scene the same two nights in a row. They alter with each change in the weather, each change of the season, each hour of the night. For the photographer accustomed to putting his camera away at sundown, night photography offers a change of pace, and the backdrop for mysterious and expressive pictures almost impossible to duplicate.

One of the most pleasant things about making night photographs is the fact that any camera, including a box camera, can be used as long as it has a "time" or "bulb" setting. I personally prefer a camera that provides ground-glass focusing, because I like to be able to view the composition exactly as it will be on the negative. This type of camera, too, uses sheet film and the negatives can be developed and printed individually whenever desired instead of waiting to finish out a roll.

Don't put your camera to bed with the chickens

Night pictures can be made wherever there is light. Naturally the exposures for night shots are long compared with those used for daylight photography. In general, it is better to use a film with a finer grain than the super-speed types of film afford because speed is not particularly important for most night pictures. Orthochromatic

IN THE STILL of night a street becomes the realm of King Winter. Note how the camera lens was protected from the rays of the street-light so as to control the brightness range. Exposure was 4 minutes at F:5.6 on Plus X film.

—Photo by E. M. Feathers



emulsions can be used equally well since color rarely plays a part in night pictures.

If you use a twin-lens reflex camera, or a miniature camera that does not feature an automatic film-wind, it is wise to carry a pocket flash with you on your night shooting jaunts. Otherwise you'll have trouble reading the exposure numbers through the red window when you advance the film.

Unless you plan to shoot only brightly lighted subjects with a very fast lens, some sort of a steady camera support is a must. A ledge or wall will do very well if you can depend upon finding one handy wherever you shoot; otherwise, a tripod is an essential accessory.

For street shots in a theater district or shopping area, exposures should be made as short as possible in order to prevent the blurring of figures and cars. I have made successful exposures as short as 1/5 second at F:11 in many cases, and in brightly lighted areas it is sometimes possible to shoot at 1/25 second with a lens opening of F:3.5. On a miniature camera this opening will provide sufficient depth for overall sharpness.

Usually a small stop of from F:11 to F:22 is used to give depth of field and overall sharpness when speed is not necessary. A small opening of this sort often means that an exposure must run as long as thirty minutes. Every exposure must necessarily be made by trial and error, but there is plenty of margin for error.

As a rule, exposure is varied on individual negatives by keeping the F: stop constant and changing the time. If the first exposure is five minutes, for instance, it won't do much good to shoot a second exposure at four minutes and a third at six minutes. The density of all three negatives will be about the same. Instead, the

(Continued on page 136)

SAILORS' HAVEN, the "Top o' the Mark" (Mark Hopkins Hotel) in San Francisco. 10,000 romances were spawned on this observation deck high above the city. Does your city have a romantic or nostalgic spot that could be given a dramatic twist of interpretation by photographing it at night? *Black Star by Crane.*

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PHOTOGRAMS

pictures without a camera

PHOTOGRAMS are the venerable granddaddies of our modern photographs. Fox Talbot was making them back in 1835, and they still rate high with experimental photographers as a form of creative art. No camera or film are needed for making a photogram. One or more small objects are simply placed on a sheet of photographic paper under a safelight, and are then exposed for a second or so to white light. When the paper has been developed in the usual manner, the shadow-images of the objects that were placed on the paper form the picture.

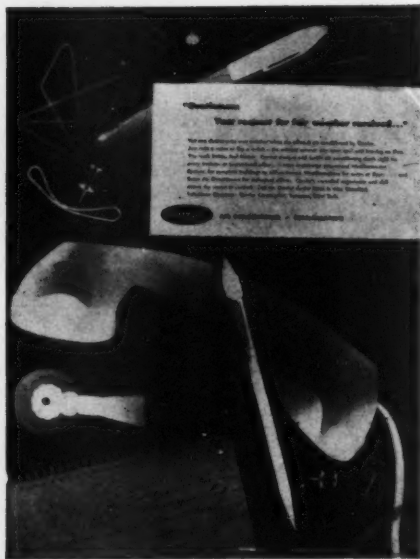
A photogram could be made on film and then printed onto paper, but exposing directly on the paper itself is easier because it can be handled under a safelight, and has emulsion speed slow enough

to permit measurable exposures to ordinary white light.

A photogram is primarily an arrangement of pattern and shapes; it suggests rather than explains—so it usually doesn't matter whether or not the print is "negative" or "positive." Because a photogram depends on pattern rather than fine details, it is usually desirable that the tone contrasts be more crisp and definite than in an ordinary photograph. This calls for a high contrast grade of paper such as No. 3, 4, or 5; in Velox or Kodabromide, for example. It can be matte or glossy.

The light source can be your enlarger, a flashlight, pen-light, room-light, matches, or perhaps even a spotlight if used at a long distance away from the paper. For instance, one popular way of making photograms is by placing objects such as flower petals, grass, pieces of paper, or other translucent whatnots on the negative carrier of the enlarger and projecting their shadow image onto the paper. Exposure should be figured like any enlargement—using test strips. Interesting effects can be obtained using this method by making several exposures on the same sheet of paper while changing the position of the paper on the enlarger base-board and perhaps even changing the position of, or substituting different objects in the negative carrier, to be printed on the same sheet.

(Continued on page 143)



A **PHOTOGRAMATIC** interpretation of a business office by Mednick has undoubtedly attracted more attention to the Carrier Corporation's (Syracuse) air conditioning messages in full page magazine ads than would have been possible with an actual photograph.

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BEACH SCENE by Andre De Dienes is an impressionistic photogram of patterns and shapes; its purpose is to suggest rather than explain. Notice how the tonal variations of different images range from gray to white according to the translucency and depth of the objects used for subject matter.

HOW TO SEE COLOR

WHY DOES A CRISP garden salad seem more appetizing on a hot summer day than on a blizzardy winter evening? Why wouldn't you want to be caught dead wearing a flaming orange necktie garnished with pink polka dots? And how does the girl in the white tennis shorts who seems guileless by day become transformed into a woman of mystery under moonlight and black velvet?

Mostly it is a matter of color. During a lifetime each of us gradually builds up unconscious associations between certain colors and certain experiences. These associations govern our "taste" in colors to the extent that we react psychologically to practically every hue. Because of your associations, for instance, you like maroon and think of it as a warm, friendly color—or you dislike maroon, perhaps, because it unconsciously reminds you of a pool of dried blood you once saw.

But while certain colors have different association values for different persons, the *general* reaction of a group of persons to a certain color is something you can pretty well predict. Knowing in advance the general reaction to a color or color combination, you hold the key to pleasing the eye if that is your goal, or to producing a specific emotional reaction if the picture is to be interpretative.

Most people unconsciously read into colors somewhat the significance that appears in the chart on page 73.

While the chart shows the general significance of specific colors and color combinations it should be remembered that the psychological effect of any specific color will vary a great deal when it is associated with other colors. For this reason, a single color should not be thought of as an abstract, but rather in combination with other colors for contrast. A crimson flower, for instance, will spoil flesh tones or pink drapery because the human eye picks up red first. Some of the "redness" of the flower would be certain to seep into, and degrade, the pink tones.

Just as red, yellow, orange, and brown are colors that convey a sensation of warmth, greys, and whites convey the feeling of

Color is a key to our human emotions.



THE BLUES, greens and whites of mountain scenes give them a cold, distant look; when the warm yellows and reds of autumn foliage furnish contrast, the picture comes to life.

Photo by Glenn Dixon.



COLOR ACTION is hard to shoot because of the slow speed of color film. Boats make a good subject because they are large and the action is comparatively slow. In this picture, the action-angle is good because the boat is moving away instead of across the camera field.

Photo by Cy LaTour.

neutrality. In analysing your own color work on the basis of color associations, however, you may find that a white drape or background appears as anything but neutral. This is because a dead white object is tricky; it reflects other colors as readily as a back-yard gossip spills confidences. The remedy is to use light gray in place of white wherever possible—and let the gray appear white in contrast with the other colors in the scene.

As soon as two colors are used together, one of three things happen. The colors harmonize, contrast, or clash. These effects are easily explained by elementary color science—but beyond that pure aesthetics take over.

The human eye and the camera lens often see the same color differently against various backgrounds. A green object, in other words, will appear to change slightly in hue and form if it is placed against several different colors of backgrounds. Photographically, this means that while

a blue-green vase and a complimentary red background might be used so that each color would heighten the brilliance of the other, they would be apt to clash so violently where the colors meet that the greenish vase would actually produce a “vibrating” sensation.

Similarly, the human eye tends to generate complimentary colors to those it actually sees, and these complementaries become mixed in with the real colors. You have seen this happen when a wheel painted with equal portions of complimentary colors was spun. The spinning colors turn to gray; theoretically the mixing of complementaries can be extended to produce white. If, then, some of your color slides appear slightly “washed out,” despite the richness of basic color in them, it may well be that something about the choice of color combinations in the picture is causing your eyes to dilute them with complimentary colors that aren’t there at all.

SIGNIFICANCE OF COLOR

Red—warmth, action, danger, excitement.

Yellow—vivaciousness, gayety, sunlight, youth.

Blue—cold, dignified, distant, shadowy.

White—purity, sacred, peace, cleanliness.

Black—mystery, death, fear, hidden.

Gray—gloom, dreariness, silence, poverty, humility.

Orange—warmth, excitement, liveliness, light.

Green—Freshness, vigor, serenity or rest.

Purple—regal, richness, pomp

Violet—feminine, solemnity, reserve, coolness.

Reds And Blacks—disaster, terror, horror.

Yellow-Green—autumn, sulphurous, disagreeable.

Green-White—calmness, coolness, cleanliness.

Blue-White—frosty, wintry, distant, aloof.

EMOTIONAL REACTIONS OF COLOR

Blue Green — Cool colors which produce a sensation of serenity, distance, restfulness, coolness.

Red Yellow Orange — Warm colors which produce sensations of activity, light, excitement, suspense.

Grey White Tan Black — Neutral Colors which set the stage for predominating hues.



Dark Horse

In the pungent darkness of a thousand commercial dark rooms many talented youngsters dream of recognition. Tosh Matsumoto is one of them.

BY GEORGE BERKOWITZ

TOSH MATSUMOTO is one of several thousand bright youngsters employed as darkroom assistant in well advertised commercial studios, who hope someday to improve on their masters. Tosh works for John Rawlings, New York's topranking fashion photographer of 154 East 55th Street, who some twenty years ago was a darkroom assistant himself.

Tosh Matsumoto doesn't know where or when his "break" will come; but meanwhile he thinks, breathes, and lives the heady wine of creative picture making on his spare time while doing a 37½-hour weekly stint for the meticulous, critical, demanding Mr. Rawlings.

From this he has learned the discipline of neatness and flawless darkroom technique. As is to be expected, he has become immune to fashion photography as a future business of his own, thinking instead that he will some day take the kind of interpretative pictures that will reveal men, each to the other, in terms of affection, gentleness, and a wholesome respect for human dignity.

In Tosh Matsumoto's creative mind,

there are threads of loneliness, sensitivity, and a feeling for beauty, buffeted by an imp of humor.

He is the kind of man you would instinctively cross the room to meet. He is an amalgam of the East and West. The usual bland features of the Japanese disappear in his disarming smile. He is reticent and soft-spoken — almost shy — but his artistic urge radiates in occasional erratic outbursts which are quickly subdued.

Books of Marcel Proust, Sherwood Anderson, Victor Hugo, Plato, Ambrose Bierce, E. M. Forster, and John Galsworthy are in his library, but he also reads the newspaper comics. He drinks beer and likes ham and cheese sandwiches.

Physically, Matsumoto is medium height and stocky. He has the build of a college wrestler. His most distinguishing characteristics, aside from his smile and glasses, are dignity, grace, and a developing confidence.

Matsumoto dismisses his own photographic accomplishments with extreme modesty. Despite the fact that his work

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Yosh Matsumoto





JAPANESE PRINT



WHEN A BENEVOLENT government, at war with Japan, was unable to filter the one traitorous Jap from the hundreds of thousands (who knew?) who were loyal, the great mass of Japanese in America were put into Relocation Camps . . . including Tosh Matsumoto. This photograph gives you the feeling of puzzlement and bewilderment the photographer himself as well as this child may have felt.

go to school during the day and paid him \$10 a month in addition to room and board.

Apparently, however, the fish diet in Japan had undermined his health, for he became ill, first with pleurisy, then with tuberculosis. He spent the next three years in a hospital. In May, 1941, he was released as cured and went home.

Then his world overturned — Pearl Harbor, the declaration of war against

Japan, and the evacuation of the Japanese from the West Coast. Matsumoto was sent first to Merced Assembly Center, where he and his camera were parted for a short time. After three months, he was transferred to the Amache Relocation Center in Granada, Colo.

Faced with restricted movement for an indefinite period, Matsumoto knew he had to learn some kind of trade. At Merced, he enrolled in a government sponsored course of commercial and showcard



lettering and in a correspondence school course of drafting.

When he was shifted to Ameche, he worked at sign painting for the center for two months, then served as mailman for a year. He was next assigned to the center's mimeographed newspaper, where he cut the headlines. For the first half-year, Matsumoto earned \$12 a month — the United States Government paid the Japanese who worked — then raised to the top-level salary of \$19 a month.

At Ameche, Matsumoto took a course of painting before he was permitted to resume use of his camera. When this permission was granted, he had no equipment nor money to buy it, so he decided to build his own. He sent for all the free booklets from manufacturers that he could get, especially those on how to make an enlarger. Ingeniously, he devised a method of using his camera as part of the enlarger of using his camera as part of the enlarger. He set up his darkroom in a box just large enough to accommodate his body. The trays and other equipment he purchased.

Matsumoto is still amused when he thinks of his makeshift arrangement. "If you think that was bad," he says, "you should have seen the darkroom of one of my friends. He dug a hole under one of the buildings in the center and used that as a darkroom."

The various booklets sent to him by manufacturers, plus a copy of the Eastman book, *"How to Make Good Pictures,"* came in handy for tips on how to improve his pictures. Difficult as film was to get on the outside, it was much more scarce inside the center. Matsumoto got all of his by mail, ordering from Montgomery Ward, the Eastman store in Chicago, and other sources. Because 35 mm film was much easier to obtain, he used a friend's Argus for much of his photography.

When the government began permitting relocated Japanese to leave the center, Matsumoto made plans to go to Chicago. Since his release was on a trial basis, he received no federal aid. Having no funds, he earned the money by taking portraits of Japanese in the center, charging 15



TWO LITTLE SNAPSHOTS that say kids are natural and a lot of fun; while at the same time gently kidding the popular notion of telling the subject to "look pleasant, please."





THE LONG SHADOWS of a late afternoon sun become useful diagonal lines to the photographer who waits them out.

cents for a 4 x 5 picture and 50 cents for an 8 x 10 print.

When he arrived in Chicago, Matsumoto stayed at a hostel for a week, but, disliking the city, decided to go to Minneapolis. After three or four days there, he became homesick and returned to Ameche.

All this uncertainty and wandering

around, of course, was due to the emotional strain of a sincere young American who believed in Democracy, and yet was looked upon with considerable suspicion by a hundred and fifty million people.

Soon he decided to strike out again. This time, however, he was placed in the

(Continued on page 132)

**How to make album prints
from your color shots.**

Black and Whites from Kodies

BY JOE MUNROE

THE OTHER DAY I was showing a friend a fistful of vacation shots when a picture of the Chicago skyline from Lake Michigan caught his eye.

"Why I shot almost exactly the same picture in color last summer," he exclaimed. "Just a minute until I get the projector out. I want to see how near alike our pictures are."

There's nothing like a 35mm slide session for special occasions, but for in-between-times it can be an awful nuisance to have to trot out a projector every time you want to look at a picture. That is the reason many color slide and transparency shooters are making black-and-white prints from their color work. The prints themselves are generally not quite as good as an original black-and-white

might have been, but they are fine for the family album, the "master" slide reference book, or for mailing to friends and relatives.

There are two not-too-difficult methods by which such prints can be made with ordinary equipment. With the first method the problem is roughly the same as that of photographing a person or landscape. First cut a hole the size of the transparency in one end of a box, then place a light inside the box. Tape the transparency over the hole, turn on the light—and there's your person or landscape in miniature. Next, carefully align and focus your camera to take a close-up of the illuminated transparency on panchromatic film, just as you would the original subject. If you like, you may even use a yellow filter

AN AMATEUR SETUP

for making black-and-white prints from a color transparency. Here the "copy stand" is part of a retouching easel. The transparency has been taped to the opal glass with a cardboard mask around it to keep out stray light. A desk lamp furnishes the light and timing is by the sweep second hand on a wrist watch. Note that a Proxar lens is used on the reflex camera for this sort of closeup work.



to darken the blue sky. From the resulting negative, any number or size of black and white prints can be made in the usual way.

The second method of making black and white prints from color slides calls for the use of an enlarger. First, place the color slide in the negative carrier; then set the paper easel opening for, let's say, a 4 x 5 film size. Focus and compose within that opening, then turn out all the lights, insert a sheet of pan film in the easel, and make a series of test exposures. The chances are that the film you use will be many times faster than enlarging paper, so you'll want to use a small stop opening on the enlarger lens, and give a very short exposure—about 3 seconds at F:22 will do as a starting point for blowing up a 35mm slide to 4 x 5 on medium-speed copying film such as Isopan. Develop normally in a soft-working developer such as D-76, and you have a black-and-white, enlarged negative of your slide.

While the process of making black and white prints from color transparencies is basically simple, there are some pitfalls to avoid along the way, if the results are to be more than just passable. Like any copy prints, these will tend to be more contrasty than the original. The accumulative errors

that result from passing through several different mechanical and chemical processes will result in some loss of detail, and a natural degrading of the tonal scale. Color transparencies are naturally of high brilliance because they are meant to be viewed with *transmitted* light. Tones in both highlights and shadows are lost when the transparency is changed to a print to be viewed by *reflected* light. On the other side of the ledger, some additional control is gained because the black-and-white prints can be "dodged" during the final printing from the copy negative.

Let's have a look at the procedure used by a commercial studio. The Grossman-Knowling Studios in Detroit are called upon for a number of scientific color pictures for the Parke Davis Co., who insist upon a black-and-white file print from each transparency.

To make these file prints, a huge 11x14 studio copy camera is rigged with a reducing-back to 4 x 5" in size. A light-box with a frame for holding the transparencies is fastened to the copy easel; inside the light-box are three white fluorescent tubes. Fluorescent lighting is used because it is cooler, and has a "softer," more evenly distributed intensity. Moreover, it is close

(Continued on page 129)

PROFESSIONAL setup for making black-and-white prints by re-photographing color transparencies. At the left, J. L. Grossman of the Grossman-Knowling Studios in Detroit is adjusting the lightbox, on which a transparency has been taped to the opal glass, to the fluorescent lights which furnish illumination. At

the right he is making the exposure with a Packard shutter and interval timer. This 4 x 5 color transparency will be copied on 8 x 10 black-and-white film. The gadget that looks like a telescope is a magnifying glass used for checking the focus on the camera ground glass.

Joe Munroe

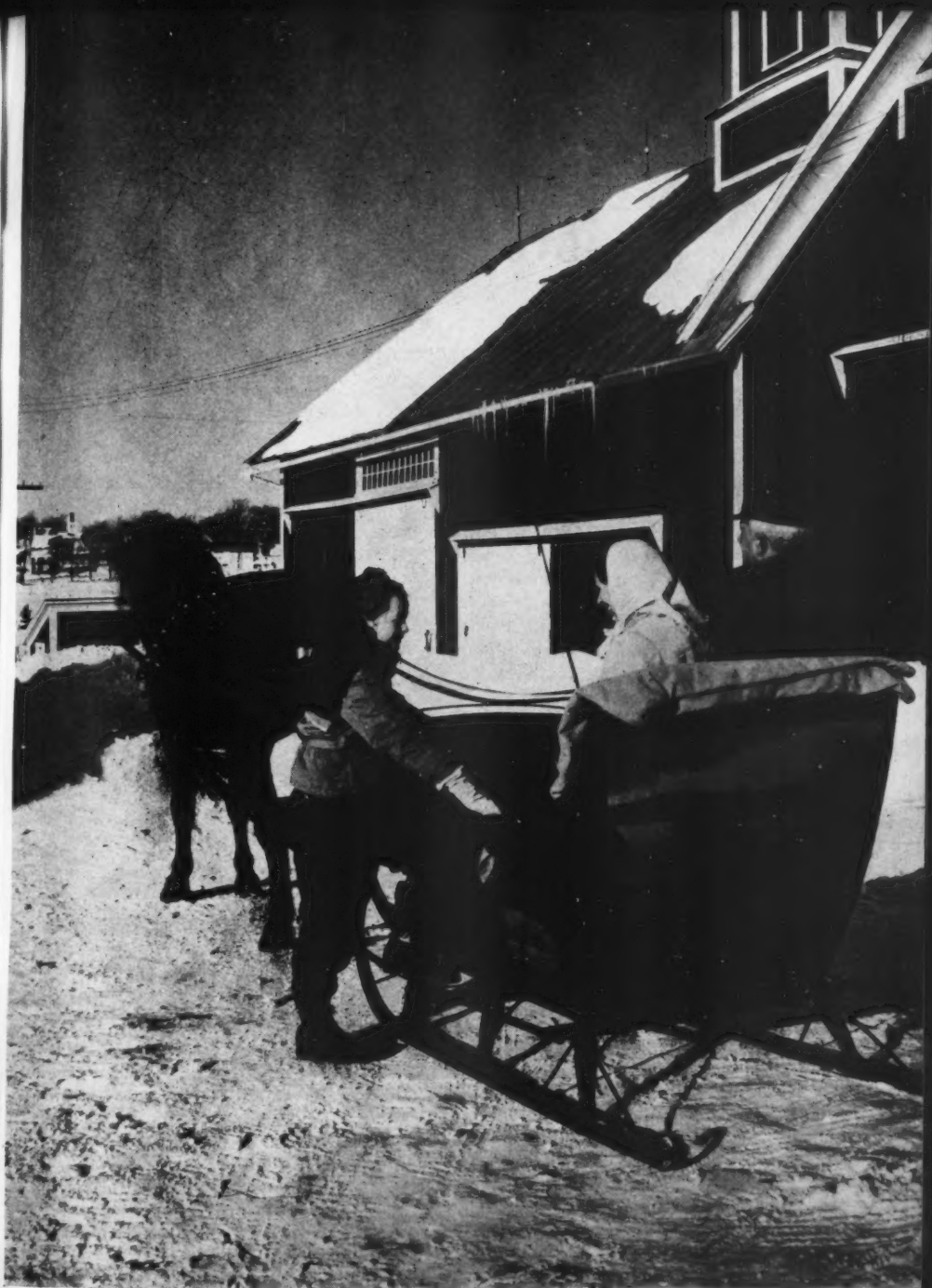


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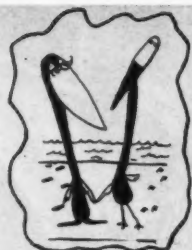
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BLACK-AND-WHITE print made from a 4 x 5 Kodachrome.

Winston Pope-Shostal



Isle Of Rhythm

Earl Leaf returns after eight months in the Carribbean photographing dances in honkytonks and waterfront cafes.

THE PHOTOGRAPHIC VAGABOND knocking around in the odd corners of the world, as I do, learns to keep his equipment and supplies as simple as possible. When I go roving around the streets of a city, climbing mountain tops or wading through swamps, I tote one type of camera, one type of film, medium-yellow and orange-red filters, lens caps, and one exposure meter, nothing else. Then when

I suddenly come upon something that needs fast operations, a couple of alligators in a death fight, for instance. I'm ready and I don't get caught with the wrong type of film in my camera. When I reload, I don't have to search my carry-all bag for any special type or speed of film.

In town I carry two Rolleiflexes around my neck, one loaded with Eastman Super-

PLANTATION WORKERS and their children enjoy this rural rumba. The rumba remained in the interior for three centuries before it reached the Cuban cities.



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NGALA'S HANDS dance out a theme of love.

XX or Ansco Superpan Press, the other loaded with Ansco Color roll film. When doing special color work, I have an assistant to help tote extra gear: in addition, there is an Anniversary Speed Graphic $3\frac{1}{4} \times 4\frac{1}{4}$, with Ektar lens, loaded with color films.

Only the pure in heart trust exposed

film to local darkrooms. One should carry along a developing tank and necessary chemicals or arrange to send everything to the home laboratory. All my film, color or B&W, is airmailed to New York within a few days after exposure. Exposed and unexposed film is stowed in adhesive-taped tins containing silica gel to absorb

moisture.

Today I returned from several months in the Caribbean photographing the dance. I went there simply as a photographer, armed with camera, flash bulbs, and a sense of adventure. My pictures were taken to provide fresh research data for the choreographer, stage designer, dancer and dance historian. To the hundreds of brown and olive-skinned friends who danced, sang, chanted and beat their tambours under a tropical moon, by the light of flares or in a honkytonk saloons while I photographed them—my thanks.

The Carribean natives weren't always willing to be photographed and I was badly mauled a few times. Often I would get caught in the midst of a maelstrom of dancing madmen and drum-crazed women who crowded and jostled me so much that working became impossible.

Starting out for a night of dance pictures in a jungle clearing, or a waterfront honkytonk cafe, I took along my two Rolleis, plenty of the fastest pan film and a large canvas bag of GE 11 or Wabash Press 50 flash-bulbs over my shoulders. For close-ups I would have preferred smaller bulbs but one can eliminate danger of burning-up a subject by cutting down on apertures and, using fast speeds. I wanted one size bulb because I worked too furiously fast for a look-see at the kind of lamps being pulled out of the bag.

I always wear a glove in order to handle hot flashbulbs instantly and also avoid dangerous burns from lamps accidentally discharged while being inserted into the gun.

When I was flush with flushbulbs, had an assistant, adequate space and an orderly crowd, as in a night club, I liked to use flash extension, with a second lamp off to one side.

Most of the time I scurry and scamper around like a monkey, climb on chairs or

LA CONGA, lusty and rhythmic, is a gayer cousin to the pale imitation that enjoyed a brief fad in the American ballrooms.







into trees, squat on my haunches, weave in and out of frenzied dancers and am ready for anything. There was absolutely no time to "compose" a picture or do any re-takes. My policy is to shoot everything and select the best action later. After much experience one gets to work at such a high-tuned pitch that mental reactions become instantaneous. Truth to tell, my conscious mind didn't "see" much good stuff that my camera recorded. There are photographs of the Voodoo ceremonies, for instance, which I do not remember seeing at all.

These pictures were the toughest of all and it was just dumb luck that I got what I did. I was dependent upon one camera as the other was being repaired. The night was black, the natives were black, and practically invisible except for flashing teeth and eyeballs. No light was available to focus or compose the scene on my ground-glass. I had to aim my camera like a fire-hose and shoot. My flashlight had disappeared, the last of my matches were used up. I couldn't read the numer-

als to know my speeds or apertures. I had to change film by the touch system, in complete darkness, and do it fast as something was happening every moment.

THE WEST INDIAN African drum beat, always in 2/2 or 4/4 time, predominates in any classification of the dance, whether it be a sacred Voodoo ritual, a simple folk dance in the country.

The drum beat has a way of entering the body at the roots of the hair, fevering the brain, sending an electric shock from one shoulder to the other, shooting down the legs to the very tips of the toes where it is exploded back into the atmosphere.

The most significant change from the traditional dances of Mother Africa was the introduction of the erotic element. Pearl Primus, gifted American Negro dancer and interpreter of primitive dances, takes the view that the "sex dancer" is a product of frustrated civilized man. I believe, however, that the hard-living West Indian Negro and his voluptuous, free-



AT THE RISK of his very life, Earl Leaf photographs the forbidden Voodoo dance, deep in the black Haitian jungle. During the dance the worshippers become hypnotic, go wild. At the far left, a dancer hangs on wooden beams and places her naked feet on red hot iron.

Center, the dancer declares she is raped by the wraith of God. Right, a "possessed" dancer steps boldly into the fire. The flames lick around her body but she is not burned. Earl Leaf saw it, photographed it, cannot explain it.

BELOW, drummer sends dancers into frenzy with slow, steady 4/4 beat.



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loving, rum-drinking, hip-swinging, bosom-bouncing, shoulder-shaking, stomach-rolling creole woman, with rhythm in her thighs, are almost wholly responsible.

The native cafe, dancehall or honky-tonk, the most likely spot for the town negro to find a willing Jezebel, offers everything else, too. Rum is his cup of forgetfulness, food his strength and energy, fighting with fists or knives his externalization of repressed rebellion against the economic and social bars which imprison him, a tawny trollop his chief goal, dance his method of achieving sublimity.

Strangely enough, most of the legislation and police regulation directed against the West Indian art forms applies to the religious and folk dances, or music, and not to the wanton dances of the cabaret or bordello.

Attempts to photograph the sacred and folk dances of the Caribbean were repeatedly hampered by the people's fear of police and church. Often I felt inspired with a missionary zeal to campaign

(Continued to page 139)

WHICH LIGHTS SHOULD I BUY?

ALTHOUGH even the most casual snapshotter may come up with a fine outdoor photograph once in a while, a good picture or strip of movie film made *accidentally* by artificial light is as rare as a gold nugget in a cinder pile. Indoors it is the photographer's skill in complimenting a subject with controlled light that creates an attractive picture.

The important thing about using artificial light is to (1) know *which* lights to use under given conditions, and (2) know how to get the most out of each particular type of light.

As a guide in helping you choose lighting equipment, we will look into the various advantages and disadvantages offered by each of the two popular types of artificial lights. In Part I of this survey we will deal only with floodlights. Next month, in Part II, we will discuss spotlighting equipment.

The term "floodlight" accurately describes the character of illumination designed to literally "flood" a subject with light.

Floods are responsible for the best in soft portrait lightings because one of the most important aspects of this broad, diffused light source is its ability to preserve shadow details. It is also unexcelled in color photography where excessive lighting contrasts are not needed, and in copy work and home-movie making.

Without a reflector, a floodlamp loses much of its efficiency because its illumination is dissipated in every direction. It may illuminate as much as six times the

area included in the camera's field of view. To conserve this "wasted" light, efficient reflectors are needed — but to be really efficient, each shape and size of lamp requires a differently designed reflector.

Since floodlights are available in a baffling array of sizes, prices, and designs, it is something of a problem for a photographer to make a choice. The only way in which he can make an intelligent decision is by analyzing the principle uses to which he will put a light.

If a floodlight is to be used for only an occasional home snapshot, a No. 2 photo-flood in an inexpensive clamp-on reflector may suffice. If, on the other hand, the light is to meet the requirements of commercial photography in black-and-white and color, a more exacting type and quality of light is necessary. In this case, several ellipso-spherical reflectors may be needed in order to produce a tremendous blaze of light without the hotspots and streaks that sometimes occur with very inexpensive equipment.

Probably the most popular single floodlight sold is the familiar clamp-on reflector holding either a No. 1 or a No. 2 floodlamp. The rubber-padded, spring handle permits these lamps to be used on floor lamps, on doors, etc., eliminating the necessity for adjustable-height lamp stands. Individual lamp stands are handy, however, for studio work and commercial "location" photography where pictures are taken in stores, factories, etc., or where no assistants are available to hold up the lights while the picture is being made.

PART I — FLOODLIGHTS. MINICAM LIGHTING EQUIPMENT SURVEY

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SURVEY



HOW MANY LIGHTS were used in making this picture—and what kind of lights were they? As you grow accustomed to judging the lighting effects in a picture, you can answer these questions correctly nine times out of ten. One floodlight in a reflector was used to illuminate the girl's face. The single highlight in each eye, and the softness of the shadows tell this much of the story. The floodlight was to the

left of the camera and a little above eye-level; the nose shadow reveals this fact. The background is neutral gray in tone and is evenly illuminated—thus hinting that it was lighted by two photofloods, one on each side. The bright spot in the girl's hair could come only from a spot-type of illumination. Add them up and we have four lights; three flood types and one spot-type. *Photo by George Boardman.*



WHEN only one flood or spotlight is used as the main light source for illuminating a subject, only one brilliant catchlight can appear in each eye. This single catchlight in each eye appears more natural than multiple catchlights because it is what we are used to seeing in another person's eyes under sunlight.

Diffusers are available as snap-on accessories for many of the better quality flood lamps. Usually the diffusers are steel-ring assemblies in which spun glass or a diffusing cloth is clamped tightly around the entire periphery. An extremely diffused light is useful as a fill-in supplementary light in portraiture or any place where relatively shadowless illumination is required.

The chief advantages of floodlights are three-fold: (1.) They are comparatively inexpensive (2.) they are easy to control when used in reflectors equipped with swivel or ball-joint sockets (3.) they throw a great deal of illumination over a wide area. A baby on the floor, for instance, could crawl out of a spotlighted area very quickly. With two or three floodlights supplying the light, the room would be illuminated sufficiently to allow good exposures to be made over a much greater area.

The chief disadvantages of floodlights are their short life (an average of 3 to 6 burning hours for the most popular sizes), and the heat they generate (sufficient to scorch cardboard reflectors or set fire to cloth that is allowed to remain in very close proximity to the bulb). A minor disadvantage is the awkwardness of the portable stands that are often used to support floodlights. This, however, is a dis-

advantage common to almost any type of photographic light.

Fluorescent Lights

For the most part, fluorescent lights, which are a type of flood, are used only in professional studios for taking black-and-white portraits. A single fluorescent tube does not provide sufficient illumination to be particularly useful for photographic purposes. Thus several tubes have to be combined in a single lighting unit before enough light can be generated for photography—and several tubes plus the necessary transformer mean that the lighting unit will be comparatively expensive for an amateur to buy.

However, the actinic value of the light is usually somewhat above visual estimates, and the units are inexpensive to operate when compared with ordinary incandescent lights.

Fluorescent lights have two additional advantages: They provide cool and glareless illumination. Every person who has had his portrait taken under the often intense heat and light of ordinary floodlights can readily appreciate this feature.

In the hands of practiced photographers, the fluorescent units can be controlled to give excellent lighting effects, particularly when supplemented by one or two spotlights placed in back of the subject for accent or "pick-up" lights. The large illuminating area of the fluorescent unit is such that the lighting is bound to be "soft." In taking portraits of women, this may be a decided advantage, because soft lighting helps to erase facial lines and wrinkle.

From the characteristics of fluorescent illuminants already outlined, it can be seen that they are not very well suited for color photography. The comparatively slow color films need a fairly high illumination level. In addition, fluorescent tubes have a color temperature somewhat higher than can be used for either Ansco Color Film or Kodachrome unless a color compensating filter is employed over the camera lens. Moreover, fluorescent tubes have intensity "peaks" in certain regions of the spectrum

which make them unsuited for scientific or commercial color photography.

One helpful adaptation of fluorescent lights is found in a fixed ceiling light. This overhead unit is designed to provide shadow illumination without interfering appreciably with the modeling produced by the main or "key" light source. Since the effectiveness of flood lighting depends upon the subject to be lighted, and the equipment used to accomplish this, there are certain points that should be kept in mind when buying new equipment.

1. *In buying a reflector, what size and/or shape of reflector is best suited to your lighting needs?* There are three major factors affecting light output and illumination control, namely: (a) reflector size, (b) reflector shape, and (c) interior finish. The shape of any reflector will control the direction of light beams, the size will control the area of illumination, and the interior finish will qualify the character or color of light.

Many photographers feel that the ideal reflector for portrait work is one whose diameter is approximately equal to the size of the subject's head.

2. *What are the merits of clamp-on reflectors?* Clamp-on reflectors can be attached to chairs, doors or room fixtures, and are less expensive than reflectors that must be purchased with a supporting stand. The clamps are covered with rubber to provide a gripping surface without marring furniture. These reflectors can fairly well duplicate the work of stand-supported reflectors, but for obvious reasons are less self-sufficient and are recommended only from the standpoint of economy.

3. *What should be considered in buying a reflector stand?* The major points to consider in buying a stand are: (a) strong tubular construction with no open seams that cause tubing to collapse by repeated pressure of thumb screws; (b) several telescoping sections so as to insure maximum and minimum folding space; (c) sections that do not come out when fully extended, so as to prevent lamps from falling; (d) large thumb screws for easier



WHEN more than one flood or spotlight is used to illuminate a subject's face, multiple catchlights appear in each eye. Multiple catchlights are distracting because they appear unnatural and call attention to lighting technique. If multiple catchlights can't be avoided in the eyes, most photographers prefer to spot out all but one catchlight in each eye.

handling; (e) heavy steel stamping at point of thumb screw so as to avoid stripped threads which render the stand useless; (f) adequate leg spread to prevent tipping; (g) proper rust-proof plating.

4. *What are the most important physical considerations to be considered in buying a reflector?* The shape and inside finish of a reflector is in most respects a matter of personal preference. Reflectors are usually aluminum spinings. They should be of a substantial gauge so as to withstand reasonable handling. Dented reflectors throw shadows and have a negative effect on the finished picture. A polished exterior can be easily cleaned and of greater importance is a smoothly etched interior surface. When properly done, such etching of aluminum produces the right shade and may affect lighting output as much as 10 to 25%. Well engineered fittings avoid "droopy" reflectors and will permit fixing the reflector at any angle. A well-made reflector will invariably employ wing screws and wing nuts so that all tightening can be done with the finger instead of tools. Irrespective of the length of the wire, which should be Underwriters approved for safety, a necessary requisite is a good 15 ft. extension cord with a 3-way service block at one end and a 10 amp. switch in the cord.

FLOODLIGHTS ON THE MARKET

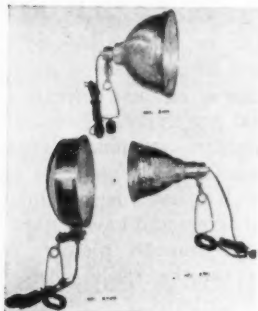
SOME of the larger lighting equipment manufacturers make more than thirty different models of equipment, hence it is impossible to illustrate and describe all of them here. Included in this survey are

typical models we believe to be of special interest to the majority of readers. In Part 2 of this survey, to appear next month, spotlight equipment will be discussed and illustrated in detail.

ACME-LITE NO. 250 FOR NO. 2 BULB

Description: Conical reflector. Diam., 6½"; depth, 7¾". Porcelain socket; 8 ft. cord, rubbered clamp; exterior polished, interior etched.

Mfr.: Acme-Lite Mfg. Co., 401 N. Wood St., Chicago, Ill. Approx. price: \$3.00.



ACME-LITE NO. 200 FOR NO. 2 BULB

Description: Parabolic reflector. Diam., 10"; depth, 7¾"; 8 ft. cord, rubbered clamp, exterior satin brushed, interior etched (also available with 10 amp. switch). Approx. price: \$2.35.

ACME-LITE NO. 2-V.8.

Description: Clamp on, Pan-Shape (No. 2). Diam., 9½"; depth, 4". Porcelain socket, 8 ft. cord with switch, rubbered clamp, exterior polished, interior etched. Approx. price: \$3.85.

BEST NO. 75

Description: Clamp-on type lampholder for reflector



spot and flood lights. Push-through socket, 6 ft. rubber cord. Price (less bulb) \$1.30.

Mfr.: Best Devices Co., 10516 Western Ave., Cleveland 11, Ohio.

COMPCO MODELS



NO. 3C101 AND 3C102

Description: Center balanced, no sag feature. Heavy aluminum, satin finished inside, polished outside. 9 ft. cord, rubber covered spring clamp.

Mfr.: Compco Corp., 2251 W. St. Paul Ave., Chicago 47, Ill. Price: \$4.95 (3C101—11½" flood); \$3.95 (3C102—6" spot).

FLUO-BRITE MIDGET



Description: 4 ¾" diameter, 6" deep, spun aluminum ball swivel, spring clamp with rubber covered jaws, nicked push-thru socket, 10 ft. of approved rubber wire, and rubber cap. Mfr.: M. Black Mfg. Co. 300-304 N. Third St., Phila. Price: \$2.55.

**FLUO-BRITE NO. 2
CLAMP-ON UNIT**

Description: 11" diameter, 8" spun aluminum. Nickel-plated push switch socket,



10 ft. of approved wire and rubber cap. Mfr.: M. Black Mfg. Co. 300-304 North Third Street, Philadelphia, Pa. Price: \$3.70.

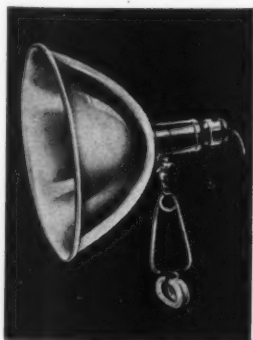
**FLUO-BRITE NO. 1
CLAMP-ON UNIT**

(Not illustrated.)

Description: 10" diameter, 6 1/2" deep, spun aluminum, 10-ft. approved wire and rubber cap. Mfr.: M. Black Mfg. Co. (Address above). Price: \$2.85.

**FLUO-BRITE NO. 2
CLAMP-ON UNIT**

Description: 12" diameter, 9" deep, spun aluminum. Large size swivel and clamp. Nickel-plated socket, 10 feet of



approved rubber wire, feed-thru switch and rubber cap. Mfr.: M. Black Co. (See address above). Price: \$4.85.

**PHOTOFLOOD CLAMP-ON
REFLECTOR**

Description: Heavy gauge aluminum, 11 1/2" in diam. Takes No. 1 or No. 2 Photoflood lamp. Satin finish reflecting surface eliminates "hot spots" by complete light diffusion. Rubber covered spring clamp permits mounting reflector on chair backs, etc. Price: (without bulb) \$4.95.



Available through Bell and Howell Co., 7100 McCormick Rd., Chicago, Ill.

**GLO-BRITE-FLOOD-
REFLECTOR DIFFUSERS**

Description: Sizes 6 to 18 inches. Approx. price: \$1.50 to \$3.90. (Not illustrated)

**GLO-BRITE ADAPTO
DIFFUSERS**



Description: Spun glass diffuser for reflector and spotlight type bulbs. Price: \$1.50.

Mfr.: Glo-Brite Products, Inc., 6415-17 N. Calif. Ave., Chicago 45, Ill.

VICTOR CLAMP-ON UNITS

Description: Standard series reflectors made of heavy gauge, spun alumi-



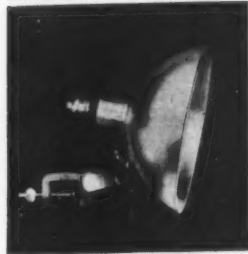
num. Frost etched interior and exterior. Nickel-plated spring clamp, rubber covered. Nickel-plated sockets with heat-proof switches. 10-foot cord with rubber plug. In two sizes: No. 10 Petite has dia. of 9", 4 3/4" depth (for No. 1 lamp), price: \$2.95; No. 60 Regular, dia. 10", 6 1/4" depth (for No. 1 lamp), price: \$3.20.

Deluxe Series feature polished exteriors, and other refinements in design. Available in a variety of shapes and sizes. Prices range from \$3.10 to \$6.50, tax exempt. Reflector illustrated is No. 70 Deluxe, 10" reflector, 6 1/4" deep, \$3.55.

Mfr.: James H. Smith & Sons, Lake and Colfax Sts., Griffith, Ind.

**KODAK VARI-BEAM
CLAMPLIGHT**

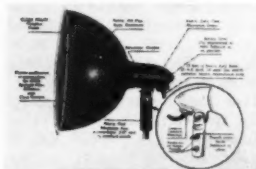
Description: Lightweight aluminum reflector, 12" in



dia. for "2 floodlamp. Interior finished in semi-matte surface to insure proper diffusion of reflected light. Ball and socket swivel mounting permits positioning at any angle, and a handle is provided for ease in use. C type clamp is felt padded. Price: \$9.75. Mfr.: Eastman Kodak Co., Rochester, N. Y.

10-INCH FLASH-FLOOD STUDIO REFLECTOR

Description: Designed to accommodate a No. 1 photo-flood lamp, or No. 22, No. 50, and No. 31 flash lamp. Any one of these sources will give an even pattern of light, free from hot spots or ring patterns over an angle of 40°. Spun from fine grade aluminum with special aluminized reflector surface and



glare proof grey wrinkled outside finish. Cast aluminum housing with nod-proof "Safe Clip" and pull-proof cord clamp. 15-foot 16-2 Buna Cord. Mfg. by Carr Associates, 8637 W. Washington Blvd., Culver City, Calif. Price: \$10.50 plus Excise Tax.

STAND UNITS

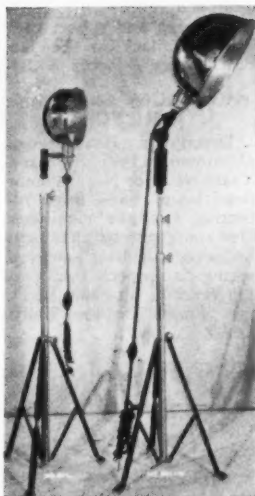
ACME-LITE NO. 81-L

Description: Pan shape, for T-20-500W medium, No. 1 or No. 2 bulbs. Diam., 8"; depth, 4½"; handle, mounted on two-section Litewater stand. Approx. price: \$12.

ACME-LITE NO. 901-W

Description: Spherical, for No. 4 bulb. Diam., 13"; depth, 7¾"; with handle. Mounted on 3 section Welterwater stand.

Mfr.: Acme-Lite Mfg. Co., 401 N. Wood St., Chicago, Ill. Approx. price: \$24.13.



ACME-LITE NO. 414-F.L.

Description: Parabolic reflector, for No. 2 bulb. Diam., 14"; depth, 9¾"; 10" flexible arm with handle.



attached to separate 8 ft. extension cord having feed-thru switch. Entire Unit is mounted on 7 ft. 2-section Litewater Champion Stand. Approx. price: \$17.95.

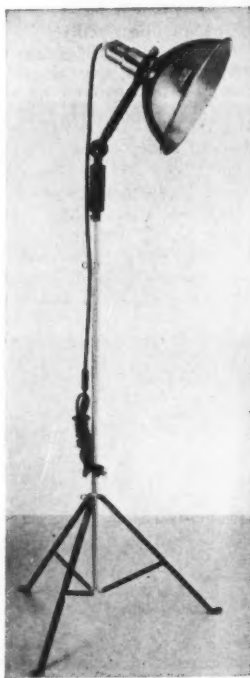
ACME-LITE NO. 918-W MOGUL UNIT FOR



Mfr.: Acme-Lite Mfg. Co., 401 N. Wood St., Chicago, Ill. Approx. price: \$13.85.

ACME-LITE 3200-L TU-LITE UNIT

Description: Three polished reflectors attached to a patented swiveling crossbar with extension ends; all reflectors are connected at center to 3-way service block

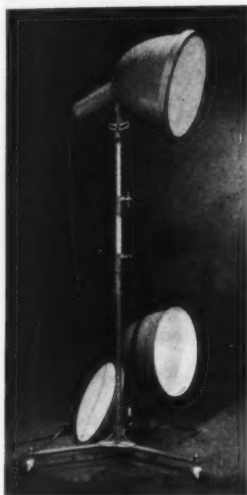


NO. 4 BULB OR PS-52

Description: Heavy gauge parabolic polished reflector with separate nok-down Socket housing for easy nesting. Diameter 18", over-all depth, 14½"; attached to 10" extension arm casting and large handle. Complete Unit mounted on heavy 3-section *welterwater* Champion Stand.

Mfr.: Acme-Lite Mfg. Co., 401 N. Wood St., Chicago, Ill. Approx. price: \$29.14.

BEATTIE NEWS REEL FLOOD



LITE MODEL NRF

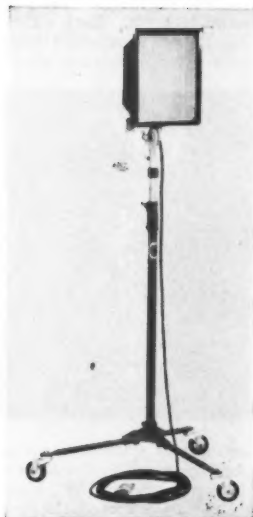
Description: Ellipto-spherical reflector 16" in diam. by 11" deep, aluminum alloy reflectors, adjustable socket center lamp sizes from 300 to 2000 watts.

Mfr.: Beattie Hi-Lite Div. Otto K. Olsen Co., 1560 N. Vine, Hollywood, Calif. Approx. price: \$57.50 (tax included).

SINGLE BROAD FILL LIGHT

Description: Perfect soft front fill light. For black & white and color photography. Uses 500 or 750 watt lamps, 25 ft. cable, min. height, 4'6"; max height, 8'6".

Mfr.: Bardwell & McAlister, Inc., Box 1310, Hollywood 28, Calif. Price: \$59.00 inc. Fed. Exc. Tax.



BARDWELL & MCALISTER DOUBLE BROAD FILL LIGHT

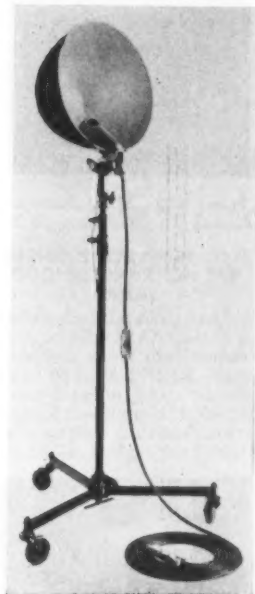
Description: Powerful fill light for large areas. For black & white and color work. Uses two 1000 watt lamps, or two No. 4 photo-floods, individual light switches. 25 ft. cord. Min. height, 4'9"; Max. height, 7'.



wood 28, Calif. Price: \$138.00 inc. Fed. Exc. Tax.

CINELITE

Description: Spun aluminum reflector anodized for softing light. Folding pedestal. Tilting: Elevation and depression controlled by clamp. Takes No. 4 photo-

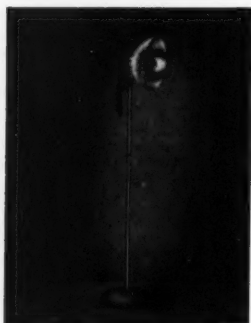


floods, 500-watt PS-40, 1000-watt PS-40, 3200°K globes. Accessories available: bracket for lowering dome to any point on upright tube, diffuser frame. Write mfr. for current prices.

Mfr.: Mole-Richardson Co., 937 N. Sycamore Ave., Hollywood 38, Calif.

KODAK VARI-BEAM STANDLIGHT

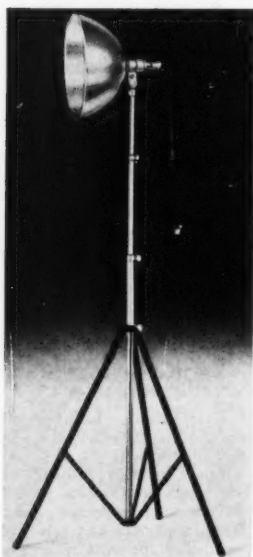
Description: Lightweight aluminum reflector, 12" in dia. for use with No. 2 flood-lamps. Interior finished in semi-matte surface for proper diffusion of reflected light. Ball and socket swivel mounting permits positioning at any angle, and a handle is provided for ease in use. Telescoping Column of stand adjustable from 3 to 5½ feet, locks in place by thumb screw. Anchored by heavy circular base which is rimmed with rubber to prevent damage to floor.



Price: \$15. Mfr.: Eastman Kodak Co., Rochester, N.Y.

FLOU-BRITE NO. 2 SINGLE FOR NO. 2 PHOTOFLOOD LAMPS

Description: 12" diameter, 9" deep spun aluminum, etched both inside and outside. B-LINE No. 600 — 3-section stand, nicked socket, 10 ft. of approved rubber wire, feed-thru switch and rubber cap. Mfr.: M. Black

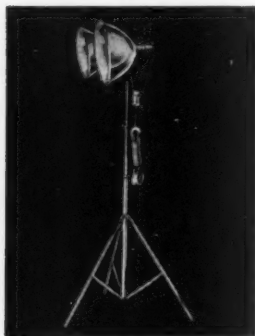


Mfg. Co. 300-304 N. Third St., Phila. Price: \$9.30.

FLUO-BRITE NO. 1 TWIN

Description: 2 Fluo-Brite reflectors, 10" diameter, 6½" deep. Cross arm is attached to the 3-section B-LINE

stand NO. 600. Each socket has 15" of approved rubber wire fitted with caps which



connect to a 10-ft. extension cord approved wire with rubber cap. Mfr.: M. Black Mfg. Co. Price: \$10.60.

FLUO-BRITE NO. 1 SINGLE DELUXE

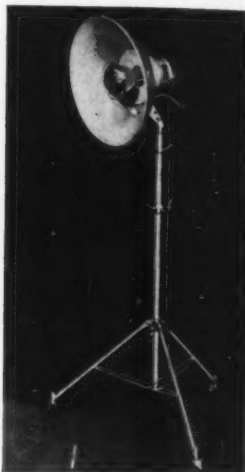
Description: Fluo-Brite reflector, 10" diameter, 6½" deep, B-LINE 3-section stand No. 600. Nicked push-thru socket, 10 ft. of approved rubber wire and rubber cap. Mfr.: M. Black Mfg. Co. Price: \$7.65. Address above.



MORSE M-60 STUDIO LIGHT

Description: 21" anodized reflector, adjustable tilt control handle, adjustable de-

flector for diffusing light. Two separate switches for controlling voltage on No. 4 photoflood lamp. Rigid, telescoping stand mounted on

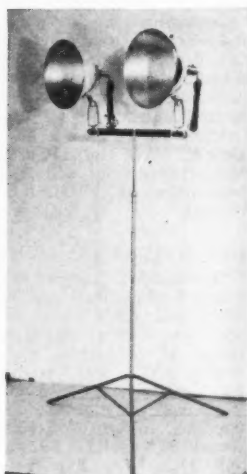


casters. Lamp can be adjusted on stand from height of 18" to 8'. Price: (Complete except for bulb) \$79.50.

Mfr.: Morse Instrument Co., Hudson, Ohio.

PHOTOFLOOD REFLECTOR STAND

Description: Legs fold, cross bar easily removed. Tripod legs remain in position without screws or



ing light.
switches for
on No. 4
Rigid, tele-
mounted on



can be ad-
from height
ce: (Com-
lb) \$79.50.
Instrument
o.

REFLECTOR

egs fold,
removed.
in in posi-
crews or

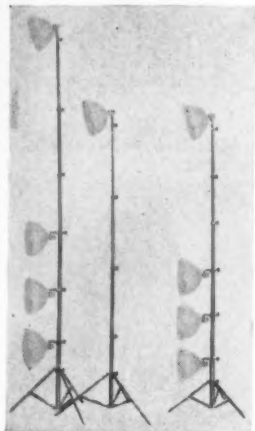


clamps. Extension rod quickly adjustable, automatically locked. Unique feature permits rotation of extension rod although locked at any height. Stand extends to 63½", folds to 43½". Price: \$4.25 (reflectors not included).

Available through Bell and Howell Co., 7100 McCormick Rd., Chicago, Ill.

PHO-TEL STANDS

Description: Collapsible metal light stands (reflectors not included). Model 103 extends to 11 feet, folds to 23 inches. Leg spread 37", weight 2½ lbs. Price: \$11.95. Model 105 extends to 8¼ feet, folds to 23 inches. Leg spread 37,

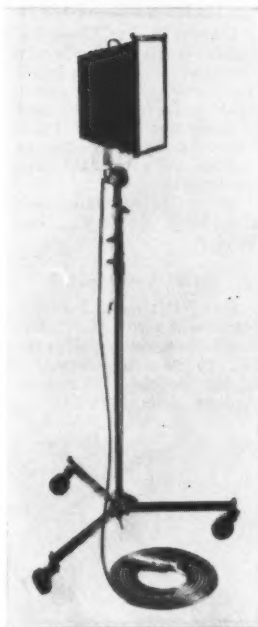


weight 1½ lbs. Price: \$6.95. Model 104 extends 8¼ feet, folds to 18½". Leg spread 35", weight 2½ lbs. Price: \$11.95.

Mfr.: Moulin-Lindsay Co., 621 Lebanon St., Los Angeles 14, Calif.

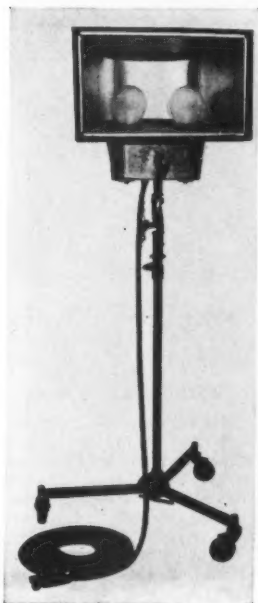
SINGLE SIDE LAMP

Description: Aluminum reflector with glass diffuser. Elevation and depression titling controlled by clamp. Takes No. 4 photo-flood, 500-watt PS-40, 1000-watt PS-40. 25 feet rubber-covered cable. Write Mole-Richardson Co., 937 N. Sycamore Ave., Hollywood, Calif. for prices.



DOUBLE SIDE LAMP

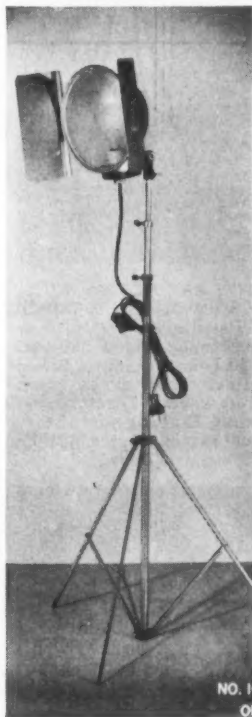
Same in construction as above except that this side lamp is equipped with two



switches and two sockets. Aperture of face is 20" wide and 12" high. Write Mole Richardson Co. for prices.

SUN RAY NO. 105 ON IX TRIPOD

Description: For No. 1 photo-flood or 500-watt T-20 bulb. Made of aluminum, brown wrinkle outside, satin finish interior. Diam. 8½"; depth 5". Has two way adjustable side shields, universal arm, porcelain socket,



switch and 15 ft. cord.

Mfr.: Sunray Photo Co., Inc., 295-309 Lafayette St., New York, N. Y. Approx. price: \$16.85.

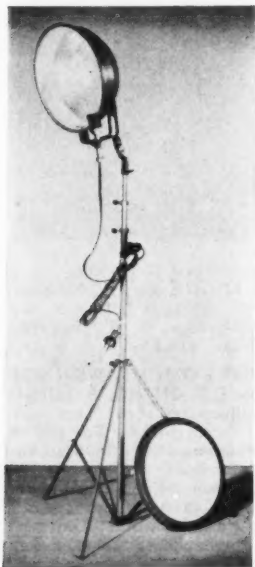
SUN RAY NO. 32 WITH SIDE SHIELD ON NO. 5 TRIPOD (Illustrated above, next col.)

Description: For No. 4 Photo-flood or 1,000-watt tubular bulb. Reflector is 13" in diameter and 6" in depth. Black crystal finish outside, satin finish inside. Universal attachable arm, mogul socket. Approx. \$44.10.



SUN RAY NO. 206 WITH SCREEN ON NO. IX TRIPOD

Description: For No. 1 or 2 photoflood or a 500-watt T20 bulb. Aluminum brown wrinkle finish outside, satin finish interior. Diam. 10½"; depth, 5"; 15 ft. wire; heavy duty switch. Approx. \$21.00. (Illustrated below.)



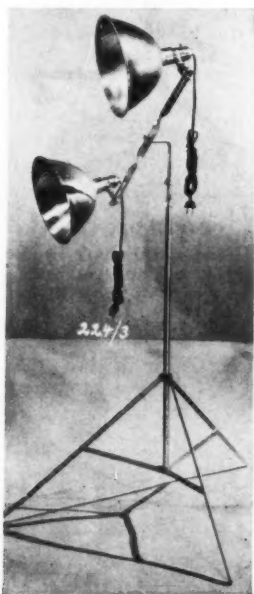
TESTRITE NO. 621/3

Description: Two 11" highly polished reflectors mounted on 3-section stand. Two swing arms permit lights to be turned and used in many positions. Will take either No. 1 or 2 floodlamps. Approx. price: \$12.00. (Not illustrated).

Mfr.: Testrite Instrument Co., 57 E. 11th St., New York 3.

TESTRITE NO. 224/3

Description: 3-section stand with cross bar taking 2 reflectors. Shown with two No. 24 10-inch reflectors of highly polished aluminum. Approx. price: \$10.50.

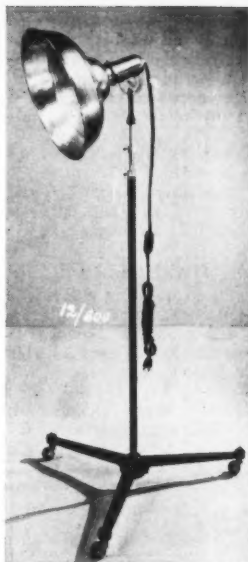


Mfr.: Testrite Instrument Co., 57 E. 11th St., New York 3.

TESTRITE NO. 12/800

Description: No. 12 reflector, 14" with heavy mogol socket. Mounted on studio castor stand which rises to 10 ft. Weight 16 lbs. For use with No. 4 photoflood. Approx. price: \$27.00.

Mfr.: Testrite Instrument Co., 57 E. 11th Street, New York 3.



TESTRITE NO. 11 FOTOLITE WITH WINGS



Description: Mounted on 3-section stand with highly polished reflector. Approx. price: \$17.00.

Mfr.: Testrite Instrument Co., 57 E. 11th St., New York 3.

TESTRITE NO. 121/3

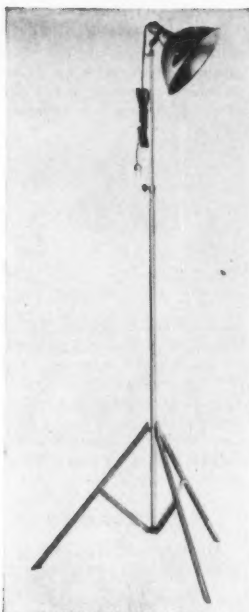


Description: 3-section stand with 11" highly polished aluminum reflector. Will take No. 1 or 2 flood bulbs. Approx. price: \$7.35.

Mfr.: Testrite Instrument Co., 57 E. 11th St., New York 3.

VICTOR STANDARD FOTOFLOOD SERIES

Description: Standard Victor Reflectors mounted on Victor No. 1 stands. Cadmium plated stands are in two sections, 6½' elevation, automatic leg lock. Single unit (illustrated) have sockets with heat-proof tips and 10 feet approved rubber cord and plug assemblies. Prices in various reflector sizes range from \$6.25 to \$7.10 complete. Victor Twin Stand Units (not illustrated) support two reflectors on adjustable arm. Keyless sockets with short individual cords connecting to cube-tap on 10-foot rub-

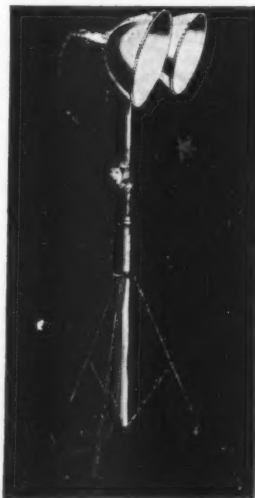


ber cord. Choice of 9" to 11" reflectors. Prices: \$9.20 to \$10.90.

Mfr.: James H. Smith & Sons, Lake and Colfax Sts., Griffith, Ind.

VICTOR HI-LO TWIN FOTOFLOOD UNITS

Description: Two 12" reflectors, 9½" deep (for No.



2 lamps), mounted on a No. 40 Victor Stand. Unit supplied with 10 ampere size Victor Hi-Lo Switch with load capacity of four No. 1 photofloods, or two No. 2 photofloods. With switch set at "Low," lamps are connected in series and burn at half intensity; with switch set at "Hi," lamps are connected in parallel and burn at full intensity. Price: \$22.35 complete. Hi-Lo switch only, \$6.40.

VICTOR R-L UNITS FOR REFLECTOR LAMPS

Description: The R-L series provides both clamp-



on and stand mounting for reflector lamps of all kinds. Also available are R-L twin stand units. Nickel-plated adjustment arm permits movement of lamps without danger of contact with hot bulbs. Clamp and collar assembly provides swivel action. Complete with push-through socket switches, 10 feet rubber cord, and plug. Prices: R-L Clamp-on Units No. 80, \$2.45. R-L Single Stand Units No. 811 with two section No. 1 Victor Stand (as illustrated), \$5.55. R-L Twin Stand Units, two section stand, \$8.25. All units tax exempt.

Mfr.: James H. Smith & Sons, Lake and Colfax Sts., Griffith, Ind.

HANDIE-BAR MOVIE LIGHT

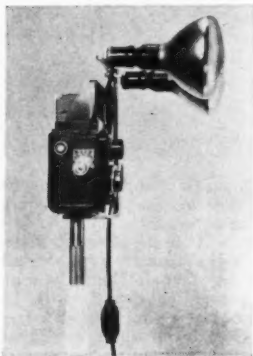
Description: Designed to be used with or without a tripod. Individually-controlled light sockets mounted in swivels at either end may be swung with the camera or pointed separately. Illumination furnished by either photo-flood reflector bulbs or spotlight bulbs. (Bulbs not included.) Price: \$5.51 (without tax).

Available through Bell and Howell Co., 7100 McCormick Rd., Chicago, Ill.



BENSEN LITE

Description: Designed for still or movie cameras. Compact aluminum stand (wt. 20 oz.) holds two reflector bulbs above camera lens.



Master switch controls both lights. 20 feet of cord. Exposure guide covering all types of film supplied with each Bensen Light.

Mfr.: A. L. Bensen & Co., 100 Innis St., Staten Island 2, N. Y. Price: \$5.98 plus tax.

TRAV-A-LITE

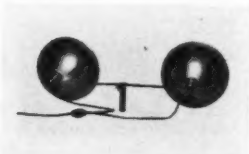
Description: Pistol-grip aluminum and plastic light support. Wt. 34½ oz. Can be mounted on tripod if desired. Supports two reflector



flood or reflector spot lights. Will also accommodate regular aluminum reflectors and photo-flood lights. Supplied with 11-foot cord and master switch. Mfr.: Trav-A-Lite Co. 3628 W. Pierce St. Milwaukee, Wis. Price: \$9.00 plus .75¢ excise tax.

VICTOR ARM-LITE

Description: Two 11" dia. spun aluminum reflectors for

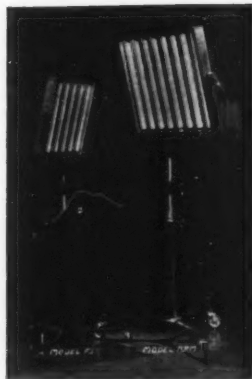


No. 2 Photo-flood lamps. Lightweight construction (8 lbs. 15 oz. complete with lamps). Aluminum bar hinged for compact carrying. Reversible camera platform provides suitable mount for all cameras; permits changing positioning of camera. Base of knurled aluminum handle also permits mounting on tripod. 15 feet approved cord, TEC switch in cord line. Price: \$9.95. Mfr.: James H. Smith & Sons Corp. Griffith, Indiana.

BEATTIE DUAL-SERVICE FLUORESCENT MODEL FS (Left) MODEL ARM (Right)

Description: Model FS designed as source of shadow illumination; five 18" tubes; 3 section stands; maximum height, 9 ft. Model ARM 8-24" tubes otherwise similar to FS.

Mfr.: Beattie Hi-Lite Div. Otto K. Olsen Co., 1560 N. Vine, Hollywood, Calif. Ap-



prox. price: \$80.50 FS; \$120.75 ARM, tax included.

KODATRON STUDIO SPEEDLAMP

Description: A new speedlamp which is twice as powerful as the Kodatron Speedlamp previously offered. Brilliant flash lasts approximately 1/5000 sec., permits use of lens apertures of F:11 to F:16. Flashtube and polished reflector mounted on telescope-type lamp stand which supports power unit designed to furnish power for 1, 2, or 3 flashtubes. Speedlamp operates on 110 to 125 volt, 60 cycle alternating current, but can be



used on direct current with converter. Maximum current consumption of 500 watts required only while condensers are being charged—about 10 seconds for each flash. Price: \$600 plus tax. Mfr.: Eastman Kodak Co., Rochester, N. Y.



For ACTION shots — insist on GRAFLEX!

This startling action photograph of a hurdler typifies the kind of pictures you can take with a Graflex-made prize-winning camera. Whether you're interested in outstanding pictures of *general subjects* or unusual photographs with

excellent definition, look to the famous Graflex line of precision equipment. See your Graflex Dealer. For literature describing prize-winning cameras, write to Room 220, Graflex, Inc., Rochester 8, New York.

ENTER THE 1948 GRAFLEX PHOTO CONTEST — \$5000 IN PRIZES

With any Graflex-made camera you can take pictures that may win a prize in the great 1948 competition. 62 prizes! Two divisions: *Action* and *Fea-*

ture! Three big groups: Teen-agers, Non-professionals, Professionals! *Plus* Color Section! Get entry blanks from your dealer.

GRAFLEX PRIZE-WINNING CAMERAS

Western Division, 3045 Wilshire Blvd., Los Angeles, Cal.
New York Sales and Service Offices, 50 Rockefeller Plaza

Minicam

PHOTO DATA

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The Care and Feeding of Cut Film Holders

The care of cut film holders begins the instant you unwrap them. That desire to whip out a slide and see what the holder looks like inside should be controlled with a firm will. Look the holder over carefully and you'll see that the natural enemy of cut film holders, dust, is already at work. There is dust or tiny pieces of cardboard on the slide and if you had obeyed your first impulse you would have pulled that dust up into the light trap to plague you at some future date.

Start Out on the Right Foot

The first thing to do before you load your new holders is to pick the most dust-free spot available for your loading table or bench. Be certain the table has been wiped off with a damp cloth. Be an old maid about your darkroom house-keeping. It's easier than spotting.

Dust each holder with a brush that is used only for this purpose. A dollar or two invested in a good brush, which should be kept in a box or drawer and occasionally blown out with moisture-free air, will prove to be a sound investment.

Dust the holder on each side before pulling the slides. Place the slides on your loading bench, at the left side unless you are a southpaw, with the WHITE sides up. Then dust the inside of the holder carefully before placing it on top of the two slides. Continue this procedure until all your holders are stacked up ready to load. Place the unopened package of cut film handy to your right hand.

Turn Out the Light

Unwrap the film. Whether you are going to load a full box of film or not, leave the film in its original little pile with the wrapping paper spread out underneath it. It is good policy to always move slowly and with deliberation when you're loading film. Tossing the package around, banging the loading bench or any other unnecessary quick or rough motions all tend to stir up

and circulate any dust in the room.

Keep your hands clean when loading film. Don't rub your nose or scratch your head (even when you're puzzled) while loading film or you'll transfer natural skin oils to the holder or the film.

Get the unwrapped film in such a position that the notches are in the upper right-hand corner, which assures you that the sensitized portion of the film will be toward you if you pick it up by the notched corner. Pick up the holder in your left hand with the hinged part at the top, holding the hinged portion straight with your forefinger. Pick the film up with your right hand and insert into the holder. If the film is inserted so that the notches are in the lower left-hand corner of the holder you will be able to identify it later without completely removing the dark slide or film. Be sure that the film goes in straight and under the film guides on each side of the holder. Pick up the slide, which will have its white side up, insert in the holder, turn the holder over, repeat the procedure and set that holder out of the way before you begin to load the next one. As you insert each slide, check to see that the white sides are out by feeling the dimples which appear on the white side only. Broken slides are a nuisance.

Keep the Slides Straight

Don't bend the slides or use force. If you're putting them in straight and the holders are properly made, no pressure is necessary.

Use the same caution in withdrawing the slides or re-inserting them at all times. Pulling the slides forward while withdrawing them not only leads to breakage but to light leaks. This is also true when inserting the slides. Admittedly it would be troublesome to stop and brush off a holder before putting it into the camera when you're out shooting, but it only takes a second to brush them off

(Continued on page 106)

A Complete **PRESS** Camera



NEEDS 3 LENSES

RAPTAR



SERIES II **f4.5...**

FOR EXTRA SPEED—THE BASIC LENS

RAPTAR



WIDE ANGLE **f6.8**

FOR FULL COVERAGE AT CLOSE QUARTERS

RAPTAR



TELEPHOTO **f5.6**

FOR CLOSE-UPS OF DISTANT OBJECTS

(Lenses for 2 3/4 x 3 3/4 Press Cameras, Illustrated)

The Series II Raptar takes care of all situations that call for a fast, normal focus lens. The Raptar Wide Angle lens gives you the wider coverage you need when you can't back away far enough to include the whole subject. The Raptar Telephoto lens allows close-ups of sports action, distant mountain peaks and other far away shots, head and shoulders portraits where good drawing and perspective are needed. Enjoy the satisfaction of being fully equipped for any picture with these three Wollensak Raptars . . . quality lenses that give you finer definition, sharp brilliant images. Ask your Wollensak dealer.

RECOMMENDED LENSES FOR PRESS CAMERAS

2 3/4 x 3 3/4	3 3/4 x 4 1/4	4 x 5
SERIES II RAPTAR f4.5		
focus 101 mm	focus 127 mm	focus *135 mm
RAPTAR f6.8 WIDE ANGLE		
65 mm	65 mm	90 mm
75° angle	88 1/2° angle	84° angle
RAPTAR f5.6 TELEPHOTO		
8"	10"	10" or 15"

Available in shutters or iris barrels
*Speed 135 mm focus f4.7

Booklets Available on all Lenses

Wollensak
MEANS FINE LENSES

OPTICAL CO., ROCHESTER 8, N. Y.

Minicam

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with a clean handkerchief or blow those little specks away before you put the holder into the camera. Loaded holders should always be kept in a case for protection. The case, of course, should also be cleaned out frequently.

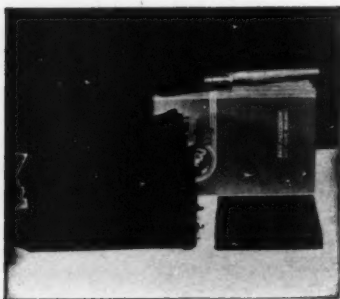
Don't load or store holders with near developer or hypo in a tray. If you store them in a room where the air is moist and laden with hypo, you are certain to have trouble with pin holes due to the drying and subsequent crystalizing of the hypo. While we are speaking of cleanliness—

Don't Lay Holders on the Ground

Where they will pick up dirt, grease, grass, moisture and dust. Never subject holders to dirt in any form.

Another fine reason for avoiding open exposure of holders is the fact that excessive exposure will sometimes fog the film even though the holders are light tight. Most slide holders are infra red proof but most holder slides will transmit infra red rays and prolonged exposure to sun light will result in fogged film. It is advisable to keep your case closed as much as possible also.

If you have two or more types of film loaded in your case or color and black and white it is quite important to have some—



Identification of Holders

Identification of holders by means of adhesive tape causes both out of focus pictures and fogged negatives. Cut film holders are manufactured to very close tolerances and the additional thickness of tape may change the film plane enough to cause trouble. It may also prevent the holder from fitting properly into the back of your camera. Many professional photographers write identification on the cover plate of the holder with a very soft lead pencil. This can be removed with a damp cloth. If a china marking pencil is used the markings can be removed with carbon tetrachloride. While we are on the subject of identification here are a couple of tips to avoid—

Accidental Double Exposure

Always have the white slides out on unexposed, loaded shoulders. As each exposure is made re-insert the slide with the black side of the slide out. When inserting the slide don't try to locate the opening with only one corner of the slide, or you might fog the film. Push the slide straight down without bending and with both corners entering simultaneously. When both sides of the holder have been exposed put the holder back into your case upside down as an additional precaution against grabbing the wrong holder. Keep different types of film in separate sections of your case whenever possible even though you have each holder marked. A slip of paper or a piece of cardboard separating one type of film from the other will serve as a reminder.

Last Minute Reminders

Keep holders and slides clean.

Stop at a gasoline station occasionally and blow out the holders and light trap with compressed air.

To remove any particles from the light trap without compressed air, stand the holder on edge and tap it sharply with your brush handle.

Keep your negatives clean and they will give you longer life and more trouble free use.

—George Boardman

Nothing else like it—

THE ORIGINAL AND ONLY TRUE INCIDENT LIGHT
EXPOSURE METER

The NORWOOD Director

SOMETHING NEW UNDER THE SUN!



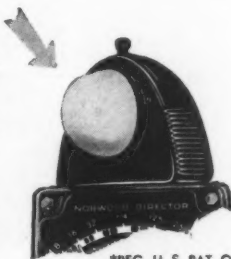
After a generation of determining exposure by reflected light readings, the NORWOOD DIRECTOR, *incident light* exposure meter was developed. Tens of thousands of photographers, professional and amateur, at once recognized the merit of a photoelectric meter designed especially to measure all of the light falling upon the camera side of the subject, i.e., the *incident light*. Here was something new—scientifically correct, and practically infallible in determining the one best shutter and diaphragm combination for every shot. Therein lies the secret of the tremendous success and great demand for the NORWOOD DIRECTOR!

THE METER WITH THE PATENTED PHOTOSPHERE*

Only the Norwood Director is equipped with the amazing Photosphere—the 3-dimensional light collector and integrator which gathers and distributes directly to the photoelectric cell all of the incident light illuminating the camera side of the subject.

SWIVEL-HEAD

The Photosphere, mounted in a swivel-head, permits turning in any direction for light gathering and leaves the dial always facing the photographer for quick readings. This is also an exclusive feature of the Norwood Director.



*REG. U. S. PAT. OFF.

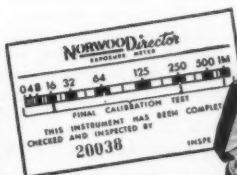
ACCURACY—Tests have proven the superiority of the incident light method of determining exposure; thousands of owners have written unsolicited testimonials as to the accuracy of the Norwood Director. Make the Norwood Director, the finest of all exposure meters, a companion to your camera and you will produce prints of which you will be mighty proud.

CONSISTENCY—Whether your shots are made indoors or outdoors, closeups or landscapes—regardless of a great variation in shutter speeds and diaphragm stops used—your black and white negatives and kodachrome transparencies, made at the direction of the NORWOOD, will have a consistent density.

The NORWOOD DIRECTOR was designed primarily to measure incident light; it is the only true incident light exposure meter.

CALIBRATION CERTIFICATE

The Norwood Director is a precise instrument manufactured to close tolerances, and referenced to the internationally known standard—the foot candle. Calibration is made in reference to lights supplied by Bureau of Standards and other nationally known laboratories. Every Norwood Director is given a final, four point calibration check and the performance of the meter is recorded on a certificate and packed with that meter, thereby assuring the purchaser of the accuracy of his instrument when it left the factory.



COMPLETE with steel case, neck cord, Instruction Manual, ASA indexes, Registration-Guarantee Card, and Calibration Certificate.

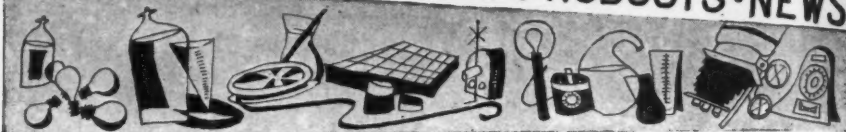
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AMERICAN BOLEX COMPANY, INC., 521 FIFTH AVENUE, NEW YORK 17, N. Y.

DUCTS·NEWS ABOUT NEW PRODUCTS·NEWS



Take Your Darkroom With You

There is no need to confine your developing and printing to your own dark room—especially if you use the FR Home Developing and Printing Kit. This kit contains the recently introduced FR "Special" Model 2 Adjustable



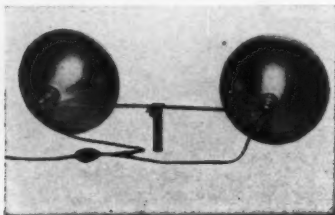
Roll Film Developing Tanks, bottle of developer, Fixol, 3 Printrays, Printing Frame, Safety Colored Darkroom Bulb, 2 Stainless Steel Film Clips, a package of Contact Printing paper and an Instruction book, completely illustrated and written so that any one can understand it.

The entire kit weighs but five pounds and can be conveniently carried about like a small suit case as illustrated. \$7.95, including tax.

The FR Corporation
951 Brook Ave.,
Nek York 56, N. Y.

Light Follows the Camera

The lighting problem of indoor photography for stills and especially for movies, is greatly simplified by the Victor ArmLite. As illus-



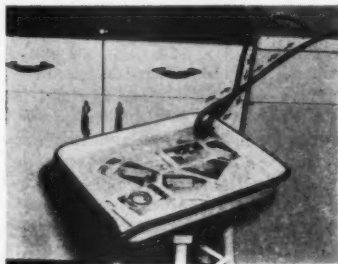
trated, the ArmLite follows the camera which is mounted on the light arm thereby assuring adequate lighting on moving subjects.

The ArmLite uses two 11" diameter Victor Reflectors, which, with No. 2 Photofloods, equal the subject illumination of 4RFL—2 bulbs. The unit is lighter than you would expect it to be. It comes in a corrugated carrying case 12" square—\$9.95.

James H. Smith and Sons Corp.,
Lake and Colfax Streets,
Griffith, Ind.

Print Washing Simplified

If, when you are ready to wash your prints, you find the sink cluttered with bottles and the like, the Hydrojet Photo Washer will solve your problem. This film-print- and enlargement-washer has a 3'8" length of inlet and outlet tubing that will permit you to wash prints anywhere near the sink. It takes fresh water



to your tray and removes it without any danger of overflowing.

The Hydrojet will operate in trays 8x10 or larger; its action is particularly good in a round pan approximately six inches deep and 18 inches in diameter, or larger. When used this way its jet pumping action produces an active rotary motion which enables many prints to be washed at the same time. \$3.95.

Hydrojet Corp.,
300 W. Jefferson Ave.,
Trenton, Mich.

Da-Lite Screens for 16mm

Realizing the ever-increasing development of 16mm movies in schools, churches, homes, and industry, the Da-Lite Screen Co., has a new screen especially for this purpose. The Picture King of "40th Anniversary Model" comes in seven sizes from 45x60 to 72x96 and retails for \$48.75 to \$95.00. Its features are: con-

a new PHOTOGRAPHIC PROCESS

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Print pictures on both sides of the material at the same time.

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MONEY BACK GUARANTEE! Your money back if the D.U.C. LABORATORIES' Sensitizer process does not fulfill every claim made for it.

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Please send me your Course of Instructions on Sensitizing and the Sensitizer Outfit. Enclosed find Check ☐ Money Order ☐ for \$10.00. I understand that my money will be returned if the process does not satisfactorily fulfill your claim.

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City..... State.....

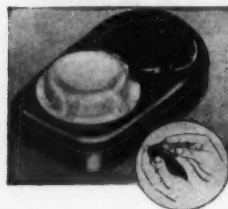
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coated gooseneck, tenite slat collar, slat lock, red tenite control knobs, aluminum equalizing slat saddle, and critical leveler.

The larger screen tripod weighs only 35 lbs. and is sturdily built of pressed aluminum.

Da-Lite Screen Co.,
2711 N. Pulaski Rd.,
Chicago 39, Ill.

Weston Invercone for Incident Light



\$3.00.

Weston Electrical Instrument Corp.,
649 Frelinghuysen Ave.,
Newark 5, N. Y.

Universal exposure meters can be converted for incident light measurement by snapping an auxiliary device, known as Invercone, into place over the photocell of the meter. Camera settings are selected from the exposure guide dial in the usual manner.

Golde's New Spotlight

When it comes to projection equipment—don't overlook Golde. They are now marketing the Hi-Liter, an entirely new and modern 100-150 watt spotlight for photographers. The Hi-Liter is convenient, versatile and efficient and is especially useful in spotlighting still lifes and portraits or special highlight effects. It is attractively designed and finished in rich Sierra Brown baked enamel. It has a 360 degree tilt and can be aimed in any direction. It has its own sturdy base.

It has double walled lamp housing for greater cooling; an 8-foot extension cord and plug; weighs 2 lbs.; and measures 6 1/4"x4"x5". \$10.00, less lamp.

Golde Manufacturing Co.,
1214-1222 W. Madison St.,
Chicago 7, Illinois

Make Own Bulbs for Color Photography

An important contribution to the advancement of indoor color flash photography is Jen-Dip, a liquid that gives ordinary flash bulbs a blue coating ideal for color photography. It takes just five seconds to coat GE bulbs, and only four seconds for Sylvania (Wabash) bulbs. The savings for each bulb compared to buying blue flash bulbs is 9c each since a bottle of Jen-Dip costs \$1.50. A beaker for dipping is included. The manufacturer claims that the approximate cost of coating a bulb is 1/3c. Jen-Dip is non-inflammable.

Jen Products Sales Co.,
419 W. 43rd St.,
New York 18, N. Y.

Eastman's New Book on Color

A completely descriptive and non-mathematical book on color for all persons interested in the subject is entitled "An Introduction to Color" by Ralph M. Evans, Superintendent of Color Quality Control at Eastman Kodak Co.

Eastman Kodak Company,

Rochester 4, New York

THE LAST WORD

(Continued from page 8)

In Photography. Can you advise me how to obtain more information about the school, the courses offered, and the provisions for enrollment?

Keene, N. H.

HAROLD SOUCISE.

• Further information concerning the Kent State University Short Course for press photographers can be had by addressing inquiries to James A. Fosdick, Executive Secretary, Photo Short Course, Kent State Univ., Kent, O.—Ed.

Solarization More Simplified

Sirs:

I just read in MINICAM for Sept. the *Solarization Simplified* article on solarizing negatives, and it made pretty good sense. Still, it seems to me most photo magazines take 1000 words to say what can be said in 100. I'll bet I could tell how to solarize a print in not more than 50 words. Does this do it?

Use a gusty negative; expose on No. 4 paper because print solarizing degrades highlights. After 20 seconds developing, flick on 60 watt white light, 5 feet away, for one second. Finish normal development. If effect is too dark, move tray further away (or shorten white light time) and vice-versa. (Negative solarization is better.)

I am sending you my friend Harvey Croze's picture to illustrate.

Gambier, Ohio.

JAP WALKER.

• You did it.—Ed.

LIGHT METER TESTS **PROVE**
VICTOR GIVES YOU...
 GREATER LIGHTING EFFICIENCY
 AT **LOWER COST**

Light meters are *factual*. They record *results*—not claims. And light meter tests invariably prove VICTOR units give *most light at lowest cost*. The reason—scientifically designed with frost-etched interiors. VICTOR gives you *most*, too, in durability and ease of handling.

There is a VICTOR Unit to meet every lighting need—in photo-flood or photoflash—at *moderate prices*.

For best results, insist on VICTOR—for 74 years, the Lighting Units of proven superiority.

No. 851—Mini-Boom Light, for exceptional versatility and wide range of positioning from floor to 10 ft. elevation. Weighs only 4¾ lbs. . . . \$8.95. Complete.

No. 621—Twin Stand Unit with two 11" reflectors, 9" deep (for No. 2 Lamps) . . . \$11.05, Complete.

No. 611—Single Stand Unit with same features as No. 621 . . . \$7.10, Complete.

No. 250—Clamp-on Unit with 11" reflector, 9" deep for No. 2 Lamp. Special swivel assembly guarantees firm, sure hold in any position . . . \$4.70

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GADGETS, KINKS AND SHORT CUTS

Using War Surplus Polaroid Attachments

Photographers who like to work on tabletop set-ups have probably experienced the difficulty of balancing light intensities when two or more small spotlights are used. Moving a particular spot further away is not always the solution since this often spreads the light into areas where it is not wanted.

An inexpensive and yet very efficient solution is the use of certain war surplus polaroid attachments which have been quite easy to obtain. These consist of a rigid metal mount containing two polaroid filters put together so that one of them may be rotated by means of a small projecting arm. These filters are a little over two inches in diameter and are therefore ideal for small spotlights. They cost less than \$1.00 and are labelled "Polaroid Variable Density Attachment-335; for "K" Sight-Sperry Part No. 206152".

Once the filters have been mounted before the lenses of the spotlight, all that needs to be done is to arrange the lights as desired and then vary the intensities by simply moving the lever arms which rotate the filter discs.

Simple Guide for Adjusting Photo Margins

When making enlargements of different sizes, where the width of the margin must be varied, it is seldom that this adjustment is made without the margin or at least the first print being off. The illustrated margin guide will eliminate this trouble.

With straightedge and pencil, lay out the desired margins on the back of an undeveloped piece of paper of the size being used. Don't use a discarded print because the paper shrinks in processing and this will throw you off. Ink in the margin lines if you like.

Placed in position on the easel, the lines will not only indicate where the mask arms are to be set, but will remind you to change the position of the hidden inner corner guide as well.

Warmer Print Image Tones

Most photographers know that aged and partially exhausted fixing baths are claimed to produce print of high quality, but of uncertain permanence. And older fixing bath apparently prevents muddy shadows, an important factor when prints are heat-dried.

The partially exhausted fixer produces a slight amount of silver sulphide which yields warm rich tones in the print. But the permanence of the resulting print is poor. However, this can be corrected by first fixing the print in an old fixing bath, then placing it in a freshly-mixed fixer to assure print permanence.

Vegetable Faces

(Continued from page 48)

dry, examine one of them for character possibilities. Does a bulge on the side of the vegetable suggest a nose. Does a hollow look like a closed eye, a mouth, or a cauliflower ear? Twist the print around, look at it sidewise, and try it upside down. Before you know it features will begin to suggest themselves and faces will begin to pop out from all angles. When this happens, charge a brush with India ink or black post card paint, and draw in simple features where they seem to suggest themselves most readily. (Fig. 1.) The results will probably surprise you, but don't stop with the first face. Try it again with another enlargement; one tomato may suggest half a dozen faces.

The second step is to select the best vegetable face you have been able to caricature, and rephotograph it. In making your copy negative be sure that the lighting is even and the subject is in perfect focus. From the copy negative you will be able to make as many prints as you want on double-weight matte paper. (Opal G was used for the accompanying illustrations.)

When the copy print is flat and dry, place it on a piece of glass and cut out the vegetable face. A razor blade will give a



SAVE ON CHEMICALS WITH NIKOR TANKS



NIKOR tanks are thrifty *all ways!* On chemicals for example, only 8 oz. of solution is needed to develop a 5 ft. 35 mm. roll in the No. 35 tank. Similar solution economy in the larger tanks. But the big economy is due to their solid stainless steel construction. They can't chip or break . . . the lustrous

surface can't corrode or tarnish . . . therefore they last a lifetime. Their design, too, makes loading and daylight filling quick and easy: provides for free circulation and uniform agitation, resulting in even and perfect development. See NIKOR tanks at dealers today or write for literature.

Prices including all excise taxes as follows:

No. 1, for V. P. Roll Film	\$ 8.50	Extra Reels, regular models, any size . . .	4.30
No. 2, for 2 1/4" x 3 1/4" Roll Film	8.50	Stirring Rod & Print Paddle65
No. 4, for 2 1/2" x 4 1/4" Roll Film	8.50	Extra Tail Can, with plain cover and lifting rod, 12", to take seven 35 mm. or four No. 120 reels, without reels	11.50
No. 5, for 3 1/4" x 5 1/2" Roll Film	11.65	Ditto, 17", to take eleven 35 mm. or six No. 120 reels	13.50
No. 6, for 3 1/4" x 4 1/4" (Kodak Film only)	11.65	Ditto, 22", to take fourteen 35 mm. or eight No. 120 reels	15.00
No. 33, for two 35 mm. 40-exp. rolls	11.85		
No. 35, for one 35 mm. 40-exp. roll	7.50		
Adjustable Cut Film and Film Pack Tank	16.50		
Multiple Developing Tank, without reels	7.90		

Also, New Nikor Safety Trimmer with guarded cutter wheel in place of dangerous shearing blade. 21"x21" size, \$24.50 . . . 12"x12" size, \$14.50.

BURLEIGH BROOKS CO., 120 W. 42nd St., New York 18, N. Y.

SPECIAL SALE OF USED PRESS CAMERAS

For those advanced amateurs who feel they are ready to move on to professional picture taking, Abe Cohen's Exchange is offering this fine collection of used Press Cameras. Many are like new in everything except price, and all have been checked by our camera experts for long life and excellent performance. These are but a few of the tremendous collection to be found at Abe Cohen's. All are subject to prior sale so write today.

4 x 5" Speed Graphic, 5 1/4" Zeiss Tessar F4.5, Press Compur, Kalart Range Finder, Abley Synchronizer, film pack adapter	V.G.	\$165.00
4 x 5" Speed Graphic, 6 1/4" Ilex Paragon F4.5, Acme Synchro, Kalart Range Finder, sunshade, filter, wide angle lens	V.G.	150.00
4 x 5" Press King, 7" Goetz Dagor F6.8 Compur, Graflex Solenoid	Exc.	135.00
4 x 5" Ernemann Sportsman, Graphic back, 5 1/4" F6.3 lens, compur shutter	V.G.	37.50
4 x 5" Technika Linhof, 5 1/4" Rodenstock F4.5, compur shutter Graflex Synchronizer	L.N.	220.00
3 1/4" x 4 1/4" Speed Graphic, Zeiss Tessar F4.5, compur shutter, Kalart Range Finder, King Sol Synchronizer, Sisto gun	V.G.	140.00
3 1/4" x 4 1/4" Speed Graphic, 5 1/4" Zeiss Tessar F4.5, rim set compur, Kalart Range Finder	V.G.	130.00
2 1/4" x 3 1/4" Anniversary Speed Graphic, Skopar F4.5 rim set compur, Kalart Range Finder, Focus spot, Heiland Synchronizer, 3 holders, film pack adapter	Exc.	150.00
2 1/4" x 3 1/4" Speed Graphic, Kodak F4.5 lens, rim set compur, Kalart Range Finder	V.G.	125.00
2 1/4" x 3 1/4" Anniversary Speed Graphic, coated optar F4.5, Graphex shutter, Kalart Range Finder, film pack adapter	L.N.	145.00
2 1/4" x 3 1/4" Anniversary Speed Graphic, Ektar F3.7 lens, supermatic shutter, Kalart Range Finder, Heiland Synchronizer, film pack adapter, case	Exc.	175.00
2 1/4" x 3 1/4" Busch Pressman, Raptar F4.5, Rapax shutter, Kalart Range Finder, King Sol Synchronizer, film pack adapter	L.N.	130.00
2 1/4" x 3 1/4" B&J Press, Rodenstock F6.3, Ibsor shutter	Exc.	55.00

Abe Cohen's Exchange features the new

KALART PRESS CAMERA

- Luminous View Finder
- Built in Range Finder
- Built in Speed Flash
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- Automatic Track Lock
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\$379.50

and a host of other features that make this one of the finest cameras in years.

Write for "bargain" booklet #201 and price list for film, paper, flash bulbs, chemicals.

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cleaner edge than will scissors. (Fig. 2.)

Place the cut-out on a piece of tec board or plywood and carefully trace around the edge. If you use plywood, glue a piece of brown wrapping paper to the surface first in order to provide a surface upon which the cut-out can be mounted. (Tec board, being a thin piece of wood sandwiched between two pieces of cardboard, already supplies this surface.) (Fig. 3.)

The tracing should be cut out with a fret saw with as much neatness and exactitude as possible. The reason the print cut-out and the backboard are cut separately is that the photographic emulsion is tender and when both are sawed out together the emulsion has a tendency to shred.

After the edges of the backing have been smoothed with fine sandpaper, the vegetable face can be mounted to it by spreadin a coat of vegetable glue over the surface of the backing (Fig. 4.) and placing the cut-out in position, smoothing it out firmly from the center.

If you are acquainted with the process of dry-mounting, using either a press or a household iron and dry-mounting tissue, this method will prove effective for mounting the cut-outs.

The final stage of preparing a vegetable face consists of coloring the mounted face with Marshal Oil Colors, Kodak Water Colors, or a similar product. (Fig. 5.) With a wad of cotton a little color (the vegetable's natural color) is rubbed into the print until the entire surface has been given an even coat of transparent color. The face can then be touched up with other colors; red for the lips, blue for the eyes, etc. With a small hole drilled in the top, or a clothes hanger pasted to the back, the vegetable face is ready to add a whimsical touch to whatever wall it decorates whether it be the wall of a fruit store, or the wall of your own kitchen or den.



Fig. 2.)
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THE WHOLE PARTY

You can be sure of plenty of light to picture baby's first birthday party, and many other happy occasions *when you shoot with G-E Midgets*. It's the quick, easy way to get precious detail and action.

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Flash by Mary G. Roberts, Oxford, Ala.

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Easy to Mount — Just slide together — no broken fingernails.

Glass Protection — No warping or scratching.

Re-usable — Economical.

Durable — no glue — no paper.

Automatic Centering — of transparency in Binder.

**At this New Low Price \$1.65
Box of 18 Binders.....**

Including 18 masks and 36 cover glasses.

NEW - IMPROVED - LINTLESS

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Attractive box of 100 masking covers and 200 glass plates.

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See Your Dealer or Write

ERIE SCIENTIFIC CORPORATION

257 Franklin Street, Buffalo 2, New York

SPEEDLIGHT Freezes It


(Continued from page 37)

Q.—What type of pictures could be made better and easier by using electronic flash aside from the fun of stopping the action of an electric fan and freezing the "punch" of a prize fighter?

A.—Speed light is used for "time-and-motion" study in industry; for close-up hospital work where the consistency of light is most important (you might be interested to know that speed flash has been used soothingly at Harvard Medical School after a patient has had an eye operation. The eye is in a delicate condition and the speed flash can be used to make color pictures, which can be studied and checked. The speed light is much easier on the eye than any other kind of light would be); technical study graphs, and nearly all indoor sports. The amateur will find that speed flash provides the means of making, at little cost, outdoor pictures of people that have no heavy face shadows. The contrasty effect of mid-day pictures can be brought into a pleasant and printable range by using the flash as a fill-in light. The professional has long used flash-bulbs for this purpose. The speed flash provides fill-in light at a cost of less than a cent a flash.

Q.—Is there a difference in the quality of speed light over that of the flash bulb?

A.—Very much. The Kelvin temperature of the High Speed Light being in the neighborhood of 6500 (about like afternoon sunlight) means a softer, more penetrating light on skin tones than that of the flash bulb (appr. 4000) which tends to block up flesh tones on panchromatic film. Speed lighting, when used in baby portraiture and wedding work, shows up details much more clearly. Kelvin temperature is part of the answer, and the high impact speed of the light is believed to be another. Speed light negatives have a sharpness and freedom from grain that gives us the idea that it effects the film emulsion in a way that is different from ordinary flash.



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● Ever see a 15X enlargement of a picture of a sheer stocking thread? Sharp and clear, isn't it? And you don't have to strain to see all the wealth of textural detail in the stocking weave, either. Another striking example of *top image quality*, even though this is a printed reproduction.*

Enjoy the thrill of seeing your own negatives enlarged in *true* detail and subtle tone . . . use a B&L enlarging lens on your enlarger. Your FREE copy of a folder on B&L enlarging lenses is available from your dealer, or on request from Bausch & Lomb Optical Co., 548-W Smith St., Rochester 2, N. Y.

*In preparing a printing plate from the original enlargement, losses in detail have occurred at four stages: screening negative, etching original engraving, impressing wax mold, and plating into wax mold.

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OPTICAL COMPANY



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Q.—Wives, kids, and the family dog have a habit of fidgeting under flood lights and complaining about an afterglow in their eyes from flash bulbs. Will speed lighting help eliminate this nuisance?

A.—Yes, because the speed light lasts 1/5000 of a second.

Q.—How do you figure the lens opening?

A.—When it comes to computing the actual exposure, all manufacturers supply factors numbers for certain films. When you divide the number of feet from the subject to the light into the factor number it will give you the F stop to use for that distance.

Q.—Who cooked up that flash bulb formula?

A.—Will Lane—when he was editor of MINICAM in 1939.

Q.—Let's say, for fun, you are taking a portrait with two identical cameras, same film, each ten feet from the subject; what would be the difference in shutter and F using a flash and a speed light?

A.—For an electronic light outfit you might use F:11. The shutter speed would be of no importance because the speed light is so much faster than any shutter. If you are taking the picture with a Press 40 you would use 1/50 at F:22.

Q.—Would the pictures be different?

A.—The one made with the Press 40 at F:22 would have a greater depth of field—so the immediate background and foreground would be sharper.

Q.—In the darkroom, do you process speed light shots the same as for any other kind of photograph?

A.—No. It is recommended that speed-light negatives be developed about one-third longer than normal. The reason is that the "softer" light of the speedlight needs the extra punch of more developing to produce the sparkle we are used to seeing in our prints. Longer development also has the effect of increasing the speed of the film so that we can use a smaller F stop than with normal development; and the manufacturers have included this

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longer development factor in their calculations to arrive at the exposure "guide" number they specify.

Q.—You said before that there were two kinds of speed-light outfits—one uses regular house current (AC) and the other uses two wet-cell storage batteries or dry cells. What is the advantage of the battery model over the AC model?

A.—Portability of the Battery Model is the greatest advantage. It can be carried around on the job, whereas the AC Model has to have an electrical outlet to plug into before it can be used. Usually, the AC Model is used in studios or in home portrait use where outlets are handy. Battery Models are used by magazine and newspaper photographers, candid wedding photographers, etc.

Q.—Are all Speed Lights synchronized the same?

A.—No. Some use mechanical synchronization which is now built into many shutter. Or you can use Kalart and Micro Switch contacts which depend on either the tripper lever or cable release socket as a means of setting off the light at the moment the shutter is wide open. Other Speed Lights use the relay system. These relays make use of the time delay now used with ordinary flash bulb synchronizers. (Magnetic or Solenoid or Synchro-flash Shutter.)

Q.—What are the names of some of the popular speed-light outfits—both AC and Battery models—now on the market and what is the prices range?

A.—By the time this is in print there may be some more, but here's a few for now: Adapta-flash, Buckley Speed-lite, Chromo-Flash, Dormitzer Synctron, Eastman Kodatron, Electronics Specialties, Everflash Speedlite, Fotolux, C-R Strobolux, Johnson Ventlite Speedlite, Kalart Synchronstrob, Kryptar, Reevelec, Reliance Bantam, S-R Strob, Super-Lumen, Triumph, Wabash Electroflash, Wilcox Strobe-lite; range in price from \$69.50 to several hundred dollars depending on size and various electrical features.

Q.—After I buy the speed light, what accessories do I need?

A.—You sound well trained. If your camera already has a built-in shutter synchronization nothing else is necessary. If your camera does not have a built-in shutter synchronization then you buy a synchronizer according to your dealer's recommendations for your camera. If it's a wet battery model using wet cells you will need a charger. You may want an extension unit.

Q.—Can you use speed light with every camera?

A.—They will work with any camera, but can not always to synchronizer with a focal plane shutter. With a Graflex metal contacts can be made on the mirror and when mirror goes up it acts as a shutter.

Q.—Why won't the speed light work with a focal plane shutter?

A.—With this type of shutter, the light passes through a slit in the moving curtain. Since the speed light lasts only 1/5000 of a second the total picture that

you would get would be of the slit in the curtain. Leica now makes a special plate for use with speed light.

Q.—What are some popular make cameras to which the speed light can be used only with open flash, or can be adapted only with considerable expense.

A.—Contax, Korelle Reflex and the old model Mercury. Perflex and box cameras are not satisfactory.

Q.—What are some of the popular cameras made with which the speed light can be used?

A.—Anso, Argus Argoflex, all Eastman cameras, Rolleiflex, Speed Graphic any flash box camera, in fact, with all between the lens shutters.

Q.—How dangerous are Stroboscopic lights?

A.—Not dangerous at all if the simple instructions of the manufacturer are followed. Any condenser carrying a charge of several thousand volts should, naturally, be regarded respectfully; and it isn't a good idea by any means to take the



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Sun Shade and Filter Holder (New)	4.50	
4 Filters at \$2.25		9.00
12 Rolis Eastman or Anso Rolis at \$1.08		12.96

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4 Filters—New, at \$2.25		9.00
12 Rolis Eastman or Anso Rolis (780 esp.) at \$1.08		12.96

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power pack apart and poke around its inards with your fingers. As a general rule it is never advisable to take them apart unless you are a radio or electronics technician. Some manufacturers have Service Stations set up for repairs and units should be sent there for checkup and repair. The machines on the market are fool-proof, but they are not damm fool-proof. They should not be used in rooms filled with combustible gas, such as Ether vapor.

Q.—Can they be used for all lighting needs?

A.—Not all, but probably about 80% of all needs for artificial lighting. As stated before, they have to be used with discrimination for shooting outdoors.

Q.—Can you use more than one light?

A.—Yes. Some manufacturers have units on the market which have outlets on the power pack for using one, two and three lights.

Q.—If I have one power pack and have two lights connected to it, will I get the same amount of light out of each lamp?

A.—Yes, but with one power pack hooked up in parallel with the additional lamps, you will get only one-half the light output from any one of the lamps. In other words, drawing the same power from the say, 60 watt seconds of energy pack, (appr. 2000 volts) you will only get 30 watt seconds from each lamp. One manufacturer, using a series hook-up indicates there is an increase of total light of 80% with the addition of an extension light.

Q.—If I am using a battery model light and it is not used for, say a month or more, what should I do to keep it in condition?

A.—When the batteries are not used for a period of time, it is best to check the water level and give it a full charging about once a month. If you are using dry batteries inspect them for leakage.

Q.—How about using electronic lighting with color film?

A.—With the 6500 Kelvin temperature of the light you can get very fair results. Some users say a 2A filter with Koda-

chrome gives a little better rendition than without a filter. Ektachrome gives very good results without a filter. Ansco Color seems to give best color when a 15 or 16 filter is used (UV). Color balance is up to the user, and a little experimentation is advised. For instance you can get a ruddy, outdoor flesh tone by using a CC 15 (wratten) filter. With Electachrome you can use a CC 33. This brings the 6500 kelvin light down to approximately 6100. One thing you can be sure of, your speed light always gives off a constant temperature light all of its life.

Q.—How can Speedlights be improved?

A.—By delivering more actual light on the film. The best way to do this is with improved reflectors especially designed for electronic light. This could also be done by making the light stronger. This can be done two ways: By piling up more voltage to go through the bulb, or by developing a bulb which will deliver more light with the same or less power, and this is being done experimentally now.

Q.—What about the future of Speedlights?

A.—Neither the human eye nor the ordinary camera can record so small a fragment out of the flow of life as can a speed light. With it we can see things we never saw before. Its future opens up more possibilities for capturing a significant moment out of time and space—for those with the eyes and the mind to see.

In the preparation of the article on Speed Light, we are indebted to the following people for technical data and assistance:

Dr. Harold Edgerton of Massachusetts Institute of Technology.

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Emil Karches of Sylvania Electric Products

J. P. Kennedy of Triumph Manufacturing Co.

Don Mohler of General Electric Co.

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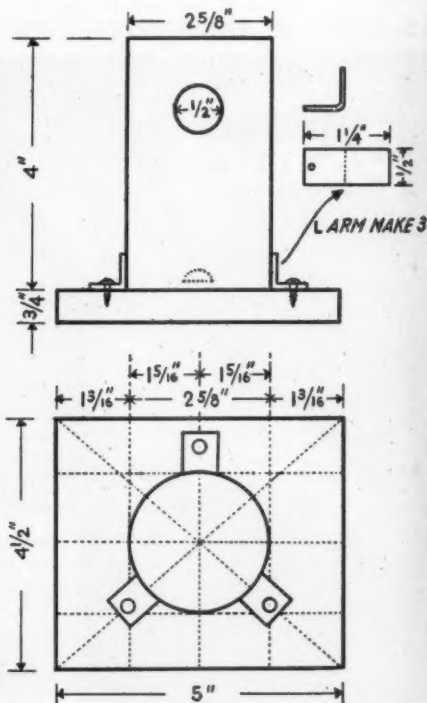
Twinkle-Timer

(Continued from page 63)

an electrical cord, a plug, a jewel light
and four wood screws. For a base board
I used the end from an orange crate cut
down to 4 1/2" x 5" in size.

By drawing a circle on the baseboard
around the edge of the housing can, the
socket fixture can be centered on the
board and fastened down with screws.
This done, connect the wire to the socket,
place the flasher button inside the socket,
and screw in the light bulb on top.

The cover of the soup can will furnish
three strips of tin 1/2" wide and 1 1/4" long.
Each of these strips should have a hole
punched in one end large enough to
accept a wood screw. Then each strip
should be bent in the center to form an
"L" arm that can be used to secure the
housing can to the base.





A hole large enough to accommodate the jewel light should be drilled about 1"

below the closed end of the housing can. The jewel can be held in place with regular solder, or with a few dabs of the kind of liquid solder that comes in tubes. On the side of the housing can opposite the jewel light, a small hole should be drilled about $\frac{1}{4}$ " above the lip flange at the bottom. This hole (near the open end of the housing can) should be just large enough to provide a snug fit for the electrical cord. After the cord has been passed through the hole, the plug for the wall outlet can be connected to the free end.

The three "L" arms should be soldered in position at the base of the housing can; if you have no soldering iron, the arms can be attached to the housing with either rivets or small bolts and nuts. After the housing has been fastened to the baseboard with wood screws, all that remains is to give the baseboard a coat of paint. In addition to dressing up the unit, the paint will act as a gasket to seal off any light leaks that might occur between the housing can and the baseboard.



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(Continued from page 27)

and less acid for increased intensification is naturally slower in action than the normal solution and should not be speeded up until it becomes almost inactive.

Most Potassium Bichromate formulas call for a long period of washing after use to remove the Bichromate color. This long washing can be eliminated by using a clearing bath which works with this or any other Bichromate intensifier formula. Mix the following:

Water 20 oz.
Potassium Metabisulphite . . 1 oz.

Again the measurements are not critical. Since the Metabisulphite is much cheaper when bought in large quantities, it is best to measure it out into a one-ounce bottle at time of use rather than to buy it in small one-ounce lots. This solution also keeps well and can be poured back into the bottle and used again. Its life is such that it usually has to be replaced when the quantity drops down, through loss, to a point where it becomes difficult to immerse your prints. Otherwise, when it no longer removes the Bichromate in a reasonable period of time, throw it away, for it is better to mix a fresh solution than to replenish an old one.

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Get a large bottle, at least a gallon-size, and cultivate the habit of pouring your old used print developer into it after an evening of print making. Don't worry if it becomes badly stained or discolored, for then it is just really "ripe." It should, however, be used only once for the re-

developing process and then thrown away.

Only by using stale developer will you get the beautiful warm tones that this process is capable of giving. Although it works well on bromide papers, it is better on chlorobromides and best of all on chlorides. A fresh developer will give you increase in brilliance but not warmth of tone. If you prefer a cold tone, redevelop your prints in an Amidol developer, mixed fresh, without the customary Potassium Bromide. A good formula is:

Water 20 oz.
Sodium Sulphite, Anhydrous 1 oz.
Amidol 1/4 oz.

Since the developer keeps for only a few hours, it should be thrown away after using.

Now that all of the solutions have thus been prepared, the rest of the procedure is very simple. First, take any completely fixed, well washed print, wet or dry, new or old, and immerse it in the bleach. The bleaching being completed in just a few



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seconds, remove the print, rinse it in running water for fifteen seconds, and then immerse it in the Metabisulphite clearing bath for five minutes, swishing it about in this solution about once a minute. Then again rinse the print in running water for another fifteen seconds. If inspection shows that the Bichromate stain has been removed, it is ready for the final step. Up to this point everything is done under the same safelight used for enlarging.

Redeveloping is done in bright light—the brighter the better. Artificial lighting will do, but direct sunlight is best of all, since solarization adds much to the finished print. Develop the print as far as it will go; from one to three minutes, depending on the strength of your old developer, is usually enough. Then remove the print from the developer and wash in running water for fifteen minutes.

And that's all there is to it. No fixing is necessary. If by chance you don't like the tone of the finished print when dry, you can do it all over again with a different developer. Using fresh developer like that first used on the print for redevelopment will restore the original tone without sacrificing the increased brilliance. For real brown tones you can even redevelop your print in a Sodium Sulphide (not Sulphite) toning solution such as is used with sepia toners.

Prints treated in this manner are quite permanent. If after processing your print has dark spots or areas, it is a sign that it was not properly fixed or washed originally. Further processing will not help such prints; throw them away. Thus the process also gives you an accurate check on the quality of your original print work.



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Black and Whites from Kodies

(Continued from page 82)

to the color temperature specified by color film manufacturers as being correct for color rendition of the dyes used in the color image.

Although correct color temperature is desirable, it is not absolutely necessary for making black-and-white negatives from color slides. If one were to use ordinary incandescent light with a "warmer" color temperature (the more yellow and orange in a light, the lower its Kelvin number), the effect would be the same as using the correct color temperature light in the light-box with a light yellow filter over the copy-camera lens.

An opal glass is also in the light-box between the lights and the transparency. Some form of diffusion must be used in any set-up to assure even illumination and to prevent any possibility of the pattern of the lights themselves getting through to the film. If nothing better is available, a



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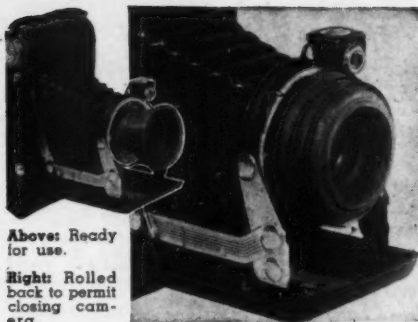
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couple of sheets of tissue paper will do. They should be at least an inch or two away from the transparency.

Any light-box, like the one at Grossman's, should be taped up and shielded so that no stray light can leak out around the frame that holds the transparency and cause a light flare in the lens. Any nearby extraneous light should also be turned off, or masked, so that there will be no reflections off the surface of the transparency.

A transparency should be carefully cleaned with "carbon tet" if smudges or fingerprints show up when the glassine envelope is removed. Dust can be brushed or flicked away with a soft brush. When the transparency is placed in the light-box frame, care should be taken to see that it does not bulge or buckle in order to avoid having portions of it out of focus. The frame in the Grossman Knowing light-box holds the color slide along all four edges. When the transparency in its frame is carefully aligned so that it is parallel to the film in the copy camera, we are ready to expose.

What about our lens? Most ordinary camera lenses are optically designed to give maximum efficiency when working from about 5 ft. to infinity. When used for extreme closeups, such as in copying, they sometimes reveal annoying weaknesses — falling off in sharpness at the corners, perhaps, or an overall lack of crisp definition even when the diaphragm is stopped-down. The lens on Grossman's copy camera is a 16" Goerz process lens, specifically designed for closeup work. For all practical

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purposes, however, any normal anastigmat lens will be satisfactory. Try and use as small a diaphragm opening as possible to insure all-over sharpness.

A rough rule of thumb is to "double the exposure for same-size copies." At Grossman Knowing Studios the average exposure is F:32 at 2 seconds on Portrait Pan film. For the "average" transparency, any medium-to-low-speed panchromatic film such as Ansco Isopan or Eastman Portrait Pan will do the trick. At Grossman Knowing Studios they also use Super anchro Press or its equivalent if the Kodachrome is a bit on the harsh or contrasty side. The faster pan films usually yield a "softer," longer-tone-scale negative. In roll-films, the Plus-X and Super-XX types would correspond respectively to the above.

Printing procedure for black and white negatives made from color transparencies is the same as for any negative. In developing these negatives, however, it is recommended that a soft-working type of developer be used, to help cut down the tendency toward excessive contrast inherent in the entire process. At Grossman's the standard developer is DK 50, and for the color copy negatives the usual time is cut 25%. D-76, Microdol or their equivalents, would do the job just as well.

Black and white copy negatives from Kodachromes may also be made through the medium of contact printing along the same general principles as outlined above. The transparency is exposed in contact with a piece of pan film rather than through a camera or enlarger. The problem in using this method is that the lighting in a contact printer is very strong due to the relative slowness of contact paper emulsions, and it is almost impossible to get a short enough exposure. The person who likes to experiment can try various screening methods on the light sources such as gray paper, or a rheostat on the power line. Once he has hit upon the right copying technique, it will be easy from then on to make black-and-white record prints from all his transparencies.

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DARK HORSE

(Continued from page 80)

indefinite leave class, which meant that the government paid his train fare and gave him \$20 in addition. Matsumoto headed for New York, staying at a Brooklyn hostel while he wandered all over the occupational field, from busboy at the Hotel New Yorker to gem setter in a lapidary shop. The government relocation agency obtained the latter job for him.

In the meantime, he had enrolled in night courses at the School of Modern Photography, which drained his limited funds. So, Matsumoto decided to invest his last \$50 for a week's course in bartending. It was difficult to find work after the course was completed, but finally he was hired to assist the service bartender at New York's swanky Hotel Chatham in midtown. Unfortunately, he had neglected to check the hours before going to work. They conflicted with his schooling, so he left after a day's work.

The emergency ended when he obtained a job making prints for outside displays of Trans-Lux Theaters, a New York chain of newsreel houses. He worked at this job for a year until he had completed his photographic course.

When asked what he learned from his photographic courses Tosh replied, "Nothing." He laughed. "I don't mean it that way. It seemed like there wasn't much they taught that I didn't know before. But when they were finished with me and said, 'Now you are a photographer,' I thought to myself, 'By golly, I am.'

"The school gave me confidence in myself. And, of course, wonderful contacts with other students and with teachers and professionals that you get to meet in the process of buying materials, going to lectures, salon shows, meetings; all these things you could do on your own. But probably I wouldn't have."

After graduating Matsumoto went home for a visit and returned to New York ready to try his hand at a professional photographic job. It was 1945, and the



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Ladies Home Journal needed a darkroom worker at \$27 a week. Matsumoto got the job, but again lasted only a day. He wasn't yet ready for such work.

One of the instructors at the School of Modern Photography told him about a temporary job in *Vogue's* darkroom. Matsumoto filled in for three or four months while the technician who was ill recovered and, in October, 1945, obtained his present position with John Rawlings, Inc., where he is the only darkroom man.

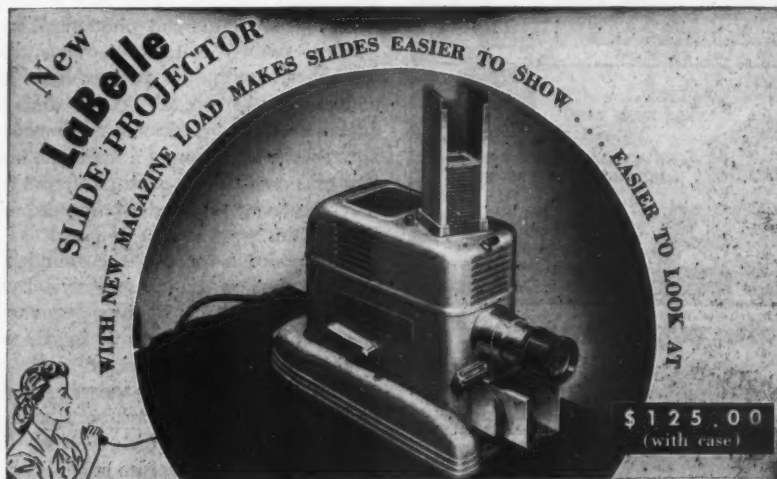
When he was studying at the School of Modern Photography, Matsumoto obtained an Eastman 5x7 view camera which he kept until six months ago. Then he traded it for a 4x5 Auto Graflex (Eastman Anastigmat f 4.5). Two years ago he added a 6x6 Rolleiflex to his equip-

ment and shot largely with that until about two months ago, when he acquired a Leica (Summar f 2), which is his current delight.

Matsumoto does all his darkroom work on his own time (mostly in the evening) at his employer's studio, where he has a Simmon Omega D-II enlarger available. Working in the Rawlings' studio, he has been able to pick up considerable information on fashion and advertising photography.

He does like to take pictures of children, as his amusing shots of Japanese boys show. He believes that child photography will be an easier path to recognition than fashion or advertising camera work.

At one time, Matsumoto carried his



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feeling for tone and lines into an adventure in expressionism. "I was simply trying to be different for the sake of being different," he explains when questioned as to why he abandoned the field.

Since he acquired the Leica, Matsumoto has become interested in action-as-it-happens documentary photography. Right now he is enamored over a two foot stack of photographs which he made of New York City street scenes, all of them imitations and not improvements of current Photo League disciples.

In the street scenes that Tosh makes there is not much emotional pull. Someone once said that if an ambitious-to-be commercial photographer never goes through this stage of abstract street scene photography, he can amount to nothing; and that if he never gets over it he will never be a commercial photographer.

Mr. Rawlings, a highly competent photographer, with a protective *Vogue* manner, looks on all these ambitions dawning in his darkroom with the experienced recognition of a man who knows that once you train a good darkroom man, he commences to wonder what size wings will fit him.

Matsumoto is one of the founders of Lens Expression 12, a camera club that includes some topnotchers among its members. The club recently is exhibiting at the Argent Galleries some of the pictures of Carl Naylor, free-lance photographer; Max Jakin, darkroom man for Alan Fontaine; Richard Meyers, who works for a motion picture company; Jess Sorachi, teacher at the School of Modern Photography; Jim Steinhardt, photo retoucher; Mimi Martel, fashion free-lancer; Jackie Coplan; and Tony Ficarola.

The members of Lens Expression 12 speak affectionately of Matsumoto, his quiet ways, and his meticulous approach to photography. One cited his unusual skill in treating everyday occurrences. Another (Max Jakin) said: "Every time Tosh goes out to take some pictures he comes back with some terrific shots. He never loads up with equipment and you never know he's around."

Models always wait for Tosh to tell them how to pose, but he never directs them; he waits for them to assume natural poses."

The ease and grace of the models is apparent in his pictures. Matsumoto's persistence in trying to get the right setting and conditions for his preconceived shots also shows up in the results. His amusing puddle jumping series according to Max Jakin, was the result of two weeks of uncomfortable searching in the rain for the right street corner for the shots.

Probably Matsumoto comes closest to his dream of documentary photography in the shots he has taken of Japanese at their re-location camp. Here, his pictures have the vibrating emotional pull I found lacking in some of his New York City shots. They all say: "We're people, too. When we are cut, we bleed. What is it that you want to do to our dignity as human beings? We are born here . . . and are Americans!"

But, of course, at that time the F.B.I. maintained to catch the one bad one in a thousand, they would have to lock them all up. In every artist's life, something happens that makes him suffer or that causes him great exhilaration; and after that he matures. The experiences Tosh had at the re-location camp affects his photographs, giving them a gentleness of purpose, and a kindness of intent.

Matsumoto the family man is a study in assimilation. He was married in June, 1947, to a beautician. His wife still works.

Their home is a tiny, two-room apartment on the first floor of a small apartment house, identical with the other houses on the street, in a middle-class neighborhood in Astoria, L. I. The kitchen and living room are one, and as you enter, the first thing you see is a large white electric ice box. The Matsumotos are comfortable there and Tosh is shyly proud of some shelves that he built.

Outside the children of the neighborhood play and quarrel and shout. Upstairs lives his former club member, Sandy Nero, close enough to offer companionship. In the Matsumoto home, you are rewarded with a feeling of happiness.

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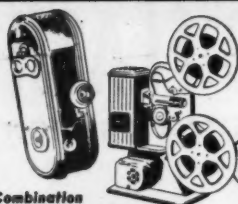
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Shoot Pictures at Night

(Continued from page 66)

respective exposures should be at least one-half (2½ min.) or double (10 min.). I usually give the equivalent of two stops each way when I'm not sure of an exposure.

A few tricks can be employed to help improve existing conditions. If automobiles or trains are moving occasionally across the field of view they will cause long, white streaks because of the headlights. By placing a hand or hat in front of the lens until such objects pass this can be avoided. In the event that you want to photograph a scene in which there is too little light to illuminate the foreground sufficiently, a hand flash may be used by firing a flashbulb at any time during the exposure.

Perhaps the best way to get a great amount of detail in a night photograph is to record it on film by means of double exposure. First the camera is mounted on a tripod and an exposure is made of a building or scene just before dark. This exposure registers the detail. Later, without moving the camera or advancing the film in the meantime, a second exposure is made in order to record the night shot in the usual way. The result is an unusual effect that cannot be otherwise obtained. Detail is visible in the shadow areas, and the highlights appear as blocked up. The first exposure is usually made early enough to be read by a meter. The second exposure is the same as for any other night picture.

Since most night pictures contain the extremes in contrast from brilliant white to jet black, negatives should be processed in a fairly soft developer in order to minimize the contrast. In time you will undoubtedly evolve pet formulas as techniques of your own for processing negatives of night shots; as a starter I would like to recommend that you try a soft-working developer like Microdol or Ansco 17, and underdevelopment of night shot negatives by about 30% of the normal developing time.

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BOOK REVIEWS

By EVERETT A. HOUGHTON

COLOR PHOTOGRAPHY FOR THE AMATEUR

By Keith Henney
McGraw-Hill, \$5

Color is a subject which a rapidly growing number of forward-looking amateurs are becoming interested in. Although a great amount of material has been written on the subject, very little authoritative information has appeared in amateur ranks on that part of the topic which perhaps interests the novice most—the processing of color work in the darkroom.

Keith Henney, well known as the co-author of the *Handbook of Photography*, has made this the principal emphasis of his newly revised work on color. A thick book of over 350 pages, it is a detailed and thorough analysis of the various color processes used in this country. The transparency methods of Kodachrome, Ansco, and Ektachrome as well as the printing methods with Carbro, Wash-Off Relief, Dye Transfer, and Printon, are the principal subjects, but the new techniques such as S-T Tripac separation and Ektacolor are also included. Full directions for exposure and development within each process are given, and the author has tried to write as from one amateur to another so that even the completely uninitiated will understand each step before attempting it.

A book like this should be a great saver of time and money to the color experimenter, and it should also be of vast encouragement to the legion of amateurs who have often toyed with the idea of processing color but have never attempted it. And so thorough and painstaking has been the authors treatment that even the professional may garner a few things from it to add to his bag of tricks.

PHOTOFACTS

By Edward S. Bomback
Fountain Press

This pocket-size, spiral-bound handbook is a collection of six photographic calculators and tables for exposing, focusing, copying, enlarging, or developing. Each is similar in design to the disk-type calculators prepared and sold by Eastman for snapshot fans who do not own an exposure meter. Their operation is fairly simple, and in this book it is further clarified by more than adequate explanatory printed material.

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BUILDING YOUR OWN ENLARGER

By A. G. Stevenson
Fountain Press

With the assistance of detailed scale drawings, the author of this book explains how to build seven different types of enlargers. By emphasizing the use of the simplest kind of materials, such as plywood, he has attempted to make their construction as easy and as economical as possible.

The first chapter is a brief outline of the basic principles of the enlarger. The second chapter explains how the standard baseboard and upright, used with all the enlargers, is put together, after which the remaining seven chapters are devoted to the seven separate types. The instructions are concise and comprehensive, and the scale drawings are large and clear.

In the back of the volume is an appendix of seven sections which contains more darkroom construction projects, including a very handy system of maskholders and masks for projection papers and a safe-light filter which is adaptable to all of the enlargers outlined. Also included is a design for a copying arm which can be used for micrography as well.

It is the author's claim that anyone who can use a rule, a fretsaw, a hand drill and a wood chisel can build any of the enlargers in this book. Judging from the quality of his instructions, his argument is pretty convincing.

HINTS, TIPS AND GADGETS FOR THE AMATEUR PHOTOGRAPHER

Selected from The Amateur Photographer
Fountain Press

The many photographers who derive almost as much pleasure from building their own darkroom and studio equipment as from making pictures will find this brief 130-page manual exactly to their taste. In all, there are over 100 different gadgets presented within its pages. Each article is carefully condensed, yet sufficiently comprehensive so that the reader should be able to follow every step without difficulty or confusion. A majority of the articles are accompanied by a simple line drawing or photograph of the project for still further clarification.

All the books reviewed in this column are obtainable from the Book Department, Minicam Photography, 22 East Twelfth Street, Cincinnati 10, Ohio, postpaid, at the prices indicated.

ISLE OF RHYTHM

(Continued from page 89)

for the rights of these people to worship the gods of their own choosing.

Among the natives, there was a feeling that the photographer was "going to make a lot of money" on the pictures and that they should share in this profit. I willingly paid small groups of dancers or presented gifts or rum when it seemed the correct thing to do.

For the purpose of the record, I photographed the *rumba* and *son* dancing at the Gran Casino Nacional in Havana to show the subdued form it reaches when danced in the ball room in Cuba.

La Conga, named after the large, long *conga* drum, originated in the slave quarters of the colonial plantations of Cuba as an unbridled expression of the slave's fettered life. Slaves, it is said, were chained in such a way that they could take but three steps in any direction and were pulled to a halt on the fourth. From this grew the four-beat *conga* rhythm and step.

In Kingston, Jamaica the name "Stork Club" over one place evoked memories of Sherman Billingsley's somewhat swankier bistro and I obeyed an impulse to see behind its doors. A half dozen couples, of mixed colors ranging from white to black and through various gradations of brown, mahogany, maroon and *cafe-au-lait*, were sitting around tables in the front parlor drinking rum and beer. Bar and bedrooms occupied the rear of the house.

There I had my first sight of the Jamaican *mento*, alias *burro*, alias *shay-shay*, one of the more erotic dances of the West Indies.

Originally a folk dance with a love theme, it became a sex-dance when brought to the cities. The *mento* seems designed to excite desires. It has a series of rhythmic movements, mostly in the haunches, stomach and solar plexus. Occasionally one sees a touch of the *rumba* in it but whereas the *rumba* is fast and has much quick foot-work, the *mento* has slow seductive movements such as the rolling belly, the swaying hips and the

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closing of eyes when auto-intoxication occurs.

For contrast I peeped into Joseph Abner's celebrated Glass Bucket and one or two other night haunts of the local gentry. Dim lights and soft music, luxuriously tropical decor, snow-white linen, attentive waiters, long cool drinks, the sight of so many smart women and groomed men, the whole atmosphere of charm and elegance was a lure hard to resist. The dancing, however, was indistinguishable from the dancing at any similar smart supper room in New York, Miami, London or Paris. I drifted back into the night seeking the native dance material.

HAITI is a dancing nation. The *tambours* and *timbales* send their syncopated rhythms across the mountainous jungles from a thousand huts, homes and *tonnelles* on Saturday nights and holiday eves for when Haitians are not worshiping their Voodoo gods with ritualistic dances and ceremonies, they are kicking the gong around in a *bombache* or party with plenty of rum, drum, dance and romance.

There is very little dancing in Haiti, or elsewhere in the West Indies, without gullets properly primed with rum, regardless whether the dancing has a sacred, secular or social purpose.

Rum, sweat, song, trance and dance. To Park Avenue or church Row it must seem obscene or vulgar, but the West Indian Negro obtains from it a release from inner tensions, fears, anxieties and repressions. Dancing is a safety valve, without which the West Indian may become hopelessly despondent or dangerously rebellious.

Despite the bloody history of the Haitian nation, the black peasants of that country have somehow retained their happy nature, sturdy beauty, dignity, friendliness and charm. The hardships they have endured would seem beyond human patience and endurance. During the war years the people lived on less and less fresh food as the crops land gave way to make room for crystopegia, urgently needed by the United Nations for artificial rubber production.

On one occasion I was attacked physically by a crowd of very angry market women for photographing them but even as they mauled me I could bear them no malice. I love these people and later I returned to make friends with them.

Photographing Voodoo

The eye of an outside observer like myself cannot catch and the mind cannot absorb everything there is to see. The camera eye, unlike the human eye, cannot be jaded and it is always a revelation to study the photographs and see the rapt and enraptured faces of other spectators as well as the movements of the dance.

In Haiti, during a Voodoo ceremony in the back country, their eyes rolling and bodies jerking, dancers drank a light brew, sprayed mouthfuls into other faces, smeared it over their bodies.

Drums and dance never ceased for one moment. Dancers climbed on each other, arms around neck, legs around waist, always in jerks and sudden, sharp, arrested spasms of movement. This was perhaps the first time a Voodoo dance was photographed.

I went mad trying to focus. The only light was a kerosene lamp carried by a girl who was never near me when I needed light most. I could see nothing at all in my ground glass view-finder. I used my last match to check my speed and aperture setting, shuddering to discover that the speed was set for 1/25 second, much too slow for this fast action. How long it had been at that speed I couldn't guess. I slipped into the mud half a dozen times and had to keep pushing away hordes of small boys and men, too, who were fighting to get my exploded flashbulbs. Re-loading the camera with fresh film in total darkness, squatting on my haunches with frenzied negroes falling on me was only a minor difficulty.

Two live chickens were used for the sacrifice this night. Held by the feet, the fowl were swung over the blaze by one of the girls, held in the fire a moment, whirled around her head, thrown over the fire again, pulled out in a continuous movement synchronized to the rhythmic

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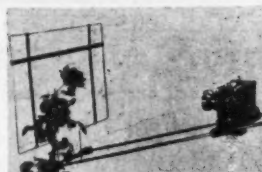
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tambours—and then brushed against the bodies of the worshipers just as life was ebbing from the hapless chickens.

A frenzied girl walked on the flaming wood red-hot coals and clasped the white iron in her hands. She hung from the beams of the little lean-to over the fire and placed her feet squarely on the iron. If there was any sizzling of burning flesh, the drums concealed it.

The girl was in a complete hypnotic state. Her feet showed hot ash, chicken blood, sweat and mud, but no burns. Rolling in the fire, her dress touching the hot iron and licked by flames, she could have burned to death on the spot but she showed no mark of a burn. This is unexplainable.

A long shelf occupying the full length of the shrine was the altar to Osange Agoue Lengi Malo, a god who is represented by a very small smooth round stone scarcely visible among all the other charms, foods, drinks, vases, weapons, flags and other fetishes placed on the altar for him. He is the god of war, one of the oldest in the Voodoo religion and his influence is considered good.

Employers go crazy trying to mold the Virgin Islander into their concept of an efficient, reliable, hard-working worker on par with the average U. S. working man. But even the most energetic white man feels that old langour creeping into his bones after a few months on these enervating islands.

Moralists may decry these conditions, if they wish, but the objective researcher knows that much of the popular jazz music, the foxtrot, *samba*, *tango*, *rumba*, *conga* and other dances and music which are a part of our everyday life came up from these islands. I, no moralist, sought the dance arts wherever they could be found.

That night after I had photographed the Voodoo dances I lay abed reading myself to sleep over John W. Vandercook's book, "Caribbee Cruise," I chanced upon this comment, "Nothing ever happens on St. Thomas after dark more exciting than a game of contract."

PHOTOGRAMS

Pictures without a camera

(Continued from page 68)

Greater variety is possible, however, if we use a freely movable light source such as a flashlight held in the hand. With this method the first step is to calculate our exposure. With the flashlight held at a convenient working distance from a clean sheet of paper, say at arm's length, a series of test strips are exposed. The strip that produces a total black, with normal development, is the maximum time we can give. If the time is too short for convenience we increase the flashlight-to-paper distance or vice versa. Let's say it turns out to be 15 secs. We know, then, that portions of the print must receive less than 15 secs. in order to have highlights and grey tones; so our exposure range will be from zero seconds, for a complete highlight, to 15 secs. for a dead black.

The important thing, so far, is to have picked out a paper and light combination that allows enough time for several different exposures. This permits shifting of the objects on the paper, changing the distance and angle of the light source between exposures, trying out various kinds of light sources for special effects; or even combining the enlarger method with the objects-on-the-paper method.

Next assemble the "subject matter" which can be anything handy. Typical objects are: drinking glasses, thread, leaves, lace, string, rubberbands, wire springs, wood shavings, or pieces of paper and cardboard cut out in either abstract or literal shapes. Interesting effects can be obtained by pressing ink or oil between two sheets of glass and projecting the squeezed distortion in the enlarger-or multiple printing a regular negative along with a photogram on the same sheet of paper.

It would be like counting grains of sand to try and set down just "how to make a

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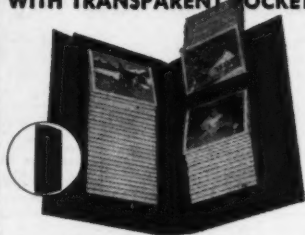


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photogram." In general, it is advisable to first make a single exposure with one object on the paper, or in the enlarger negative carrier. After this has been developed, note the design and tonal relationships, and get acquainted with the idea that the light area you see during exposure will be dark and the "shadow" will be light.

Then begin a series of exposures, changing the positions of the object on the paper. Note how the tones overlap and how three-dimensional effects pop up. Along about now, an idea should begin to shape up as to just what we want this photogram to look like. As with any form of craftsmanship, a photogram needs a direction and an end in view. It cannot be haphazard "photo-doodling." Once a few trial photograms have been made, and an idea matures; it will be easy to make the mechanical decisions on method of lighting, choice of subject matter, and number of exposures.

No discussion of photograms gets far before bumping four-square into the name of L. Moholy-Nagy. As a proponent of experimental photography, he was the driving force behind the photogram's development. His reasoning, condensed, was that a serious beginner has two strikes against him when he starts out trying to photograph a face, for instance. There are all sorts of things to worry about that really don't have anything to do with the fundamentals of photo technique. Facial expressions, character rendering, make-up, backgrounds, and whether or not Uncle Bill has his cravat tied correctly, must be considered.

In a photogram it is only the reaction of light and shadow on an emulsion to worry about: Different contrasts of emulsion, type and intensity of light, varying arrangement of lights and shadows.

This also applies to composition. In producing photograms there is no book of rules. It boils down to simply using light and emulsion to fill a given space with a design that pleases and excites the maker.

The Pro Selects His Best

(Continued from page 58)

dollars per day. Some well-established men's fees soar way above this figure for a single shot, and some stories are done for less. Twelve days' actual work per month is a good average. The remainder of the time is spent in traveling, making arrangements, and setting up.

While free-lance and staff men show great variation in their choice of equipment, they all use the $2\frac{1}{4} \times 2\frac{1}{4}$ twin-lens reflex camera. Although their choice is influenced by portability, this is far from the decisive reason for the universal acceptance of this "little camera." It is an extremely versatile instrument, the most omnipotent camera available today. It employs film available all over the world, and allows ground glass focusing.

It is for this reason that while many men carry larger cameras— $3\frac{1}{4} \times 4\frac{1}{2}$ or 4×5 , rarely an 8×10 —the bulk of the work seen in magazines today was photographed with one of these $2\frac{1}{4} \times 2\frac{1}{4}$ twin-lens reflex cameras. When candid pictures are needed in adverse lighting conditions, they use a 35mm camera.

Photography is a Language

Like all artists who have something to say, photographers, too, run up against the limitations of speaking through mass media. Magazines work on proven formulas which corral readers. Mass readership is, in turn, sold to advertisers. This arrangement happily provides relatively large editorial funds but leaves, perforce, many good things photographically unsaid.

For photography has been truly called by one of its most ardent champions, John R. Whiting, a language. It speaks to millions in its various ways.

There is the Brownie snapshot or friendly, informal letter which says: "How are you? We are fine. Wish you were here. Look at my new hat."

(Continued to page 146)

The text and photographs of this article are from the book "Photo-Graphic '49" published by Whittlesey House (\$6.95), N.Y.C.



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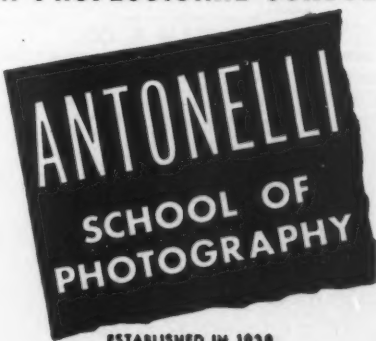
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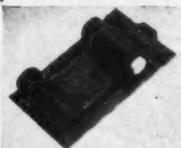
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There is the press photograph which screams: "Tot slays self, five." Or "Revolution rages in Latin America."

There is the salon photograph which speaks softly of trivia and the studio-bound artiste who writes the expressionist poetry of the visual language.

Covering the great bulk of communication stands the magazine photograph. It has a little of the hard-bitten fact of the press picture, some of the feeling-about of the amateur experimentalist, a good deal of the artistry of the ivory tower poet, the friendly informality of the snapshot. It is important now and its possibilities are boundless.

This, then, is the general outline of the profession, so young yet so important, magazine photographs have become strong and powerful purveyors of art and ideas, fact and fancy, far beyond the dreams of Father Daguerre.

How an Assignment Begins

A picture story begins as an idea that demands photographic treatment and its fate is often determined before the photographer has had an opportunity to influence its direction.

If the photographer is fortunate, he will be called upon at an early stage in the development of the story. He will be asked for his ideas, and his visual approach and picture-thinking will help determine locale, subjects, and the general photographic treatment. Better stories, editorially wiser photographers, and better picture editors result from this kind of participation and cooperation.

In contrast to this procedure, a story may be developed into a detailed shooting script, and a hard and fast schedule of shots, which is the product of a purely verbal-minded editorial staff. A few editors think that there is more to it, that some stories demand other elements; there are still many photographers who feel that such blueprinting offers serious limitations to their work.

A photographer lives hectically, and exhaustion is the occupational hazard. Few editors know or care how many hours

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were spent in a stifling darkroom or racing around hunting for just the perfect prop. They're interested in the prints that finally come across their desks.

Despite the frenzy, and possibly because of it, every magazine photographer steals some quiet time for contemplation, for a sort of dreamlike musing on his past and future pictures. In these interludes, he pulls himself together as an artistic identity, defeating the centrifugal forces which seem to be pulling him apart.

Is Fashion Just A Living?

A number of the members of the Society of Magazine Photographers are working for *Vogue*, *Harper's*, *Bazaar*, *Charm*. The world in which they live is peopled by models who come to work wearing what amounts to a regulation uniform of flat gold shoes, corduroy skirt, white blouse, and a plain swept back hair-do.

A fashion photographer develops a kind of inferiority about the importance of his fashion work when stacked up alongside that of other photographers. It is significant that when fashion photographers were asked to submit their best pictures for the Society's first book, everything but fashion photographs was handed in. This section exists at all only as a result of a last-minute job of pleading and storming on the part of the Society.

The key to the paradox is the photographic subject. Fashion is ephemeral. Five gruelling hours of work may result in a superb photograph of a hat, Though subtly reflecting manners and mores, it is still primarily the photograph of a hat. A documentary photographer may spend five hours on a picture, but he has recorded a revolution, a strike, a universal event. He has recorded news. Time makes it history. By contrast, there is the fashion photographer and his hat picture. It concerns one sex, one strata of society, one portion of the globe. It has an esoteric and specific interest as against a universal one. He has recorded a fashion. Time merely makes the fashion unfashionable. Possibly it is the turn of the head or the tilt of the feather. In a matter of months, the very essence of

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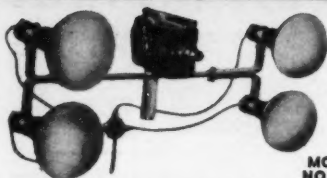
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its being—the fashion itself—is passé.

The destiny of a fashion photographer is twined with fashion, and fashion is a perishable commodity. It slips through the fingers and dissolves into tomorrow. Ten years from the day the picture was taken, the studious head may nod, the scholarly finger may indicate that there, indeed, was a milestone in photography. But dissection always indicates death. The photograph lived once and briefly when it stopped several thousand eager eyes and anchored them to the page it was printed on. Later recognition is academic tribute. And the essence of fashion, however mental the photographer's approach, is not intellect but emotion.

Yet some fashion photographs survive purely on their esthetic excellence, everlasting credit to the talent that conceived them and a directional arrow for the neophytes to follow. The best efforts of the fashion photographer are fine art.

As with fashion itself, there are, inevitably, cycles in fashion photography. When, twenty years ago, Munkacsy took high fashion out of doors to give it fresh air and action, that was the beginning of a new candid school. When, four years ago, Richard Avedon turned an electric fan on his models, that was the germ of another.

As the fashion photographer strikes his stride, he evolves his personal formula, which is individualized to the extent that no one familiar with the field need glance at a credit line to identify the photograph. The melting luminosity and muddled pastels of a Dahl-Wolfe, the gold-tone elegance of a John Rawlings, the arrogant humility of a Penn composition, the female perception of a Frances McLoughlin, the young, high-key informality of a Mark Shaw, the flat-of-the-hand impact of a Landshoff, these are signatures—and standards—unto themselves. These are definite steps in a progressive evolution.

Dogs and cats, if not lions and lambs have been known to live together, and editors and photographers break daily bread together, too.

The mutual complaint between editor

and photographer arises because, by and large, each profession is pretty much in ignorance of the other. Just as Mrs. Jones doesn't believe that the old man had a "hard day at the office," and Mr. Jones takes no stock in her having "bent over the hot stove all day," editors know little about the field problems of photographers; photographers don't know, or won't admit, that the editor serves many masters: publisher, readers, writers, art directors, and his own conscience, and that his decisions may not *always* be the result of the fact that he is a warped, sadistic personality, bent on the destruction of good photography.

Although a new trend toward cooperation is becoming evident, and many magazines are allowing the photographer a greater voice in the planning of stories so that there are less complaints all around, editor stories still circulate, and probably always will.

Just recently one of the ASMP members was assigned to shoot the flight of black hawks in a dense wood at twilight. Holding out for verisimilitude, he did the story and was told in no uncertain terms by the editor that the pictures would never reproduce; they were too murky. He visited the hawks again and this time used strobe lights. The editor loved the pictures. The photographer got letters from amateurs all over the country saying that the set was completely phony, unlife-like, posed—in short, that the photographer should be ashamed of himself.

When the chips are down a photographer's best friend is his mother.



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SALONS AND EXHIBITS

★ FOLLOWS P.S.A. RECOMMENDED PRACTICES

Closing Date	Name of Salon	For Entry Blank, Write to	Number of Prints and Entry Fee		Dates Open to Public
Exhibit to see	Twenty-third Annual Salon of Photography.				Museum of Fine Arts of Houston, Houston, Texas, Oct. 10-24
Exhibit to see	★ Eighth Annual Victoria International Salon of Photography.				Empress Hotel, Victoria, B. C., Canada, Oct. 17-24
October 6	★ 1948 P.S.A. Exhibition of Photography.	Clarence Ruchhoff, 3756 Middlebrook Ave., Cincinnati 8, Ohio.	4 prints and/or slides in 3 divisions; plus motion picture films	\$1.00 each division; motion picture fee varies	Cincinnati Art Museum, Cincinnati, Ohio Nov. 3-14
October 10	★ 6th Annual International Photographic Salon of Trail Camera Club.	Trail Camera Club, Box 35, Trail, B. C., Canada.	4	\$1.00	Masonic Hall, Trail, B. C., Canada, Oct. 27-30
October 20	★ Fourth Mississippi Valley International Salon of Photography.	Norman Brice, Salon Chairman, 51 Ridgemore Dr., St. Louis 5, Mo.	4 mono-chrome, color or transparencies	\$1.00	City Art Museum, St. Louis, Mo., Nov. 6-21
October 23	★ Eighth Annual Salon of Nature Photography.	Kentucky Society of Natural History, Box 81, University of Louisville, Louisville 8, Ky.	4 prints and/or transparencies	\$1.00 each division	University of Louisville, Louisville, Ky., Nov. 21-28
October 25	★ First Minneapolis Color Slide Exhibition.	George C. Johnston, 114 S. 5th St., Minneapolis, Minn.	4 2x2 slides	\$1.00	Y. W. C. A., Benton Hall, Minneapolis, Minn., Oct. 30 and 31
November 2	★ 17th Annual Minneapolis International Salon of Photography.	George C. Johnston, 114 S. 5th St., Minneapolis, Minn.	4	\$1.00	Minneapolis Institute of Arts, Minneapolis, Minn., Dec. 5-30
November 8	Third Omaha International Salon of Photography.	Mrs. Edwin Mogridge, Chairman, 6031 Manderson St., Omaha, Nebr.	4	\$1.00	Joslyn Memorial, Omaha, Nebr., Nov. 24-Dec. 19
November 13	Seventeenth Annual Detroit International Salon.	Earle W. Brown, Salon Secretary, 19355 Greenlawn, Detroit 21, Mich.	4 prints or color slides	\$1.00	Detroit Institute of Arts, Detroit, Mich., Dec. 19-Jan. 9
November 16	Second Hudson-Mohawk International Salon of Photography.	Mrs. Mabel Lehman, 445A First St., Albany, N. Y.	4	\$1.00	Albany Institute of History and Art, Albany, N. Y., Dec. 9-Jan. 3
November 24	★ First Magic Empire Color Slide Exhibit.	E. A. Nesbitt, 1042 N. Gary Place, Tulsa 4, Okla.	4 2x2 slides	\$1.00	Dec. 1-8
November 30	★ II Cuban International Salon of Photography.	Club Fotografico de Cuba, O'Reilly No. 366, altos, Havana, Cuba.	4	\$1.00	Gallery of Club Fotografico de Cuba, O'Reilly 366, altos, Havana, Cuba, Jan. 10-30
December 6	★ 11th Annual Springfield International Salon of Photography.	Louise Lochridge, Salon Secretary, The George Walter Vincent Smith Art Museum, Springfield 5, Mass.	4	\$1.00	The George Walter Vincent Smith Art Museum, Springfield, Mass., Jan. 3-23
December 7	First Maryland Salon of Natural Science Photography.	Earl H. Palmer, Chairman, c/o Natural History Society of Maryland, 2101 Bolton St., Baltimore 17, Md.	4	\$1.00	Baltimore Museum of Art, Baltimore, Md., Jan. 4

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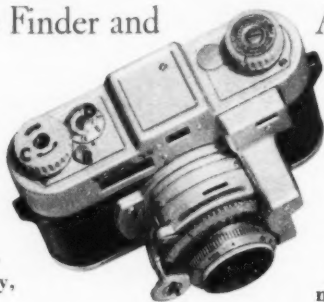
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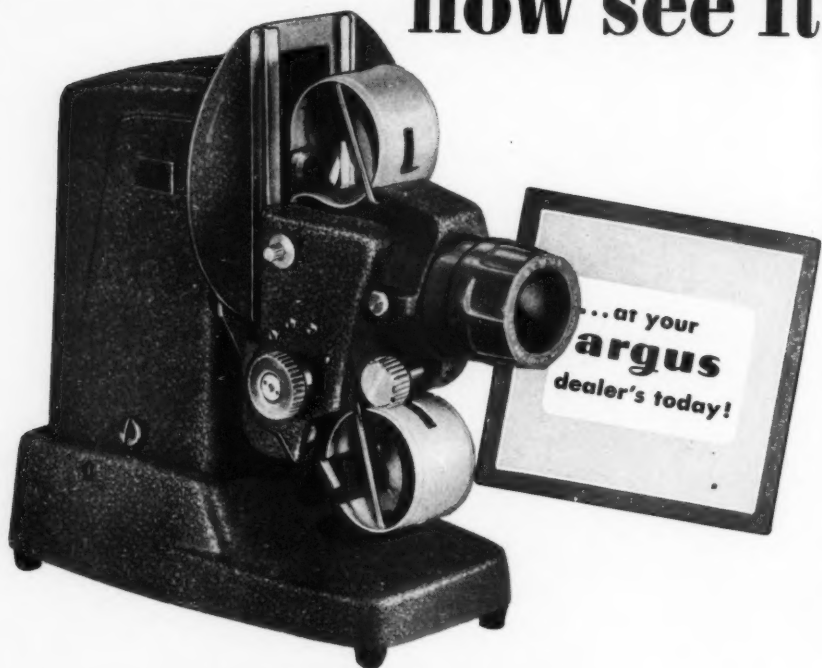
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Can You Guess How This Was Made? page 18.

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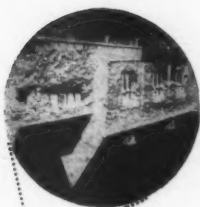
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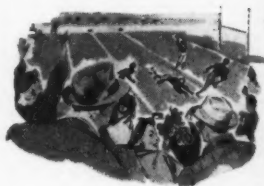
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Cover by Ray Atkeson



Shoot Pictures At Midnight
(See page 64)

MINICAM PHOTOGRAPHY (TITLE REG. U. S. PAT. OFF.) PUBLISHED AT 22 EAST 12th ST., CINCINNATI, OHIO. PUBLISHED MONTHLY BY THE AUTOMOBILE DIGEST PUBLISHING CORP. YEARLY SUBSCRIPTION, \$2.50 IN U. S. A. AND POSSESSIONS, CANADA AND COUNTRIES IN PAN-AMERICAN POSTAL UNION, \$3.00. ELSEWHERE, \$3.50. SINGLE COPIES, 25c. CANADA, 30c. EASTERN ADVERTISING OFFICE: EVERETT GELLERT, 43 PARK AVENUE, NEW YORK CITY, PHONE MU 9-2370. MIDWEST ADVERTISING OFFICE: BERNARD A. ROSENTHAL, 333 NO. MICHIGAN, CHICAGO, ILL., PHONE ANDOVER 7132-33. WEST COAST ADVERTISING OFFICE: SWAIN ASSOCIATES, 639 SOUTH WILTON PLACE, LOS ANGELES 5, CALIFORNIA, PHONE DUNKIRK 6-2248. ENTERED AS SECOND CLASS MATTER AT CINCINNATI, OHIO, U. S. A., MARCH 21, 1938, UNDER THE ACT OF MARCH 3, 1879. ESTABLISHED 1937.



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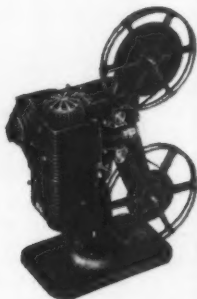
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Sirs:

We read with prejudiced interest your article
on "Slide Files" written by Mr. Charles G.
Mulligan. (Aug. issue, page 71—Ed.)

Our company manufactures Slide Files in
four different sizes. Our information, before we
undertake to manufacture a Slide File Box,
comes from the dealers who handle these items
day in and day out, and it seems that while
requests were made for the particular sizes we
manufacture, none were in evidence for the
size to accommodate the 120 transparencies.

We would be pleased to have an opinion
from Mr. Mulligan, and from other MINICAM
readers as well, as to whether they feel that a
Slide File made to accommodate a 120 or 620
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Glamour with a Leica

Sirs:

Way back in 1946 one of my fellow readers
expressed doubt in the Last Word column that
good glamour pictures could be shot with a
miniature camera having a short (50mm) focal
length lens.

The enclosed "before" and "after" pictures of
the same model will, I hope, help change his
mind if he is still of the same opinion. Both of
these shots were made with a Leica, and the



whole transition was brought about by costume,
pose, lighting, and makeup. The most difficult
part, incidentally, was getting the young woman
to let me submit both shots to MINICAM!

Claremont, Calif. ROBERT F. FRAMPTON

The ASMP

Sirs:

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made most of the large circulation magazines' photographic work.

The American Society of Magazine Photographers was the result. It provided an opportunity for men with common interests and problems to get together and iron out their joint difficulties. They exchanged technical information, arranged facilities for obtaining scarce equipment and began to look into the problems of rates, contracts and markets.

Today, the American Society of Magazine Photographers provides free legal service for its members, supports a group hospitalization plan, and acts as a source of information on business problems.

Its office, at 1476 Broadway, N.Y.C., has become a clearing house of information. Members scheduled for foreign assignments drop in to find out who's in Paris, whom they might run into in Johannesburg, and whether there's a color processing lab in Bombay. Editors call to find out where Joe Doakes can be reached, and whether there's an ASMP member in Idaho. Young people call for vocational guidance assistance.

This fall the American Society of Magazine Photographers is adding two more services to its members and to the general public. Its first annual, PHOTO-GRAPHIC '49, is being published by Whittlesey House (208 pages, \$6.95). The book will contain 190 pictures and articles on fashion photography as well as picture story, and magazine photography. Its

first exhibit is scheduled for October 15 to October 31 at the Pepsi-Cola Center, 47th and Broadway, where over 200 prints and transparencies will be shown, all of them produced by members of the American Society of Magazine Photographers.

1476 Broadway, DORIS BIRNBAUM
New York 18. ASMP.

• For more about ASMP see Photo-Graphic '49 on page 50.—Ed.

Birth of a Tornado

Sirs:

I enjoyed the article on "Capturing Clouds" in the September issue, and especially the part about using red and yellow filters. Here is a



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FLYING START

toward PHOTO-STARDOM

Shooting with the stars of the photo-world are hundreds of young careerists, recently graduated from America's largest SCHOOL OF MODERN PHOTOGRAPHY. Though they came from many lands and from every one of the 48 states, they had one goal in common—speedier success through superior training. Professionals now in every branch of photography, they found in SMP's famed schooling what they had come for—a flying start to success in photography.

1. "Down to Earth" came amateur SIMON BRUNO (see left), when his high-flying ambitions led him from studio to studio, seeking a camera career. "Experience or training?" they insisted. Eager for the skill that professionals demand, he toured one photo-school after another. His choice . . . SMP! Now, a trained careerist, he has discovered vast, new opportunities. Television is his goal, where he will capitalize on his flair for fashion photography.

By SIMON BRUNO

Testing "the wonderful staff at the SCHOOL OF MODERN PHOTOGRAPHY," GORDON E. KING is already celebrating his "flying start" toward stardom. Only months ago, he was an amateur, bursting with yearning for a photo-career. Resolutely looking forward to a long, hard-over-hand climb, he sought the guidance of SMP's galaxy of celebrated stars. Yet, so speedily did he acquire professional facility, so quickly did SMP-acces teach him the "tricks of the trade" that he stepped immediately from SMP's cosmopolitan atmosphere into the post with one of Indiana's leading studios.

4. "A family affair" is JOSEPH DE RIGGEE's busy Massachusetts studio. With Mrs. D., he has built a flourishing business in just 2 years. Looking back, he recalls 6 long years of freelancing, never attaining the success of his dreams. He remembers the hard choice—to stow away his gear and "go back to school." Like careerists the world over, he chose SMP—and success. "At present," he writes, "we're booked solid for 2 months."

By JOSEPH DE RIGGEE

5. Highest honors come naturally to ARTHUR HEITZMAN. Awarded a 4-year engineering scholarship, a brilliant career lay before him. But it had been the camera, not the compass, that filled his teens with thrills. Which life for Heitzman? On an exciting camera-tour of the world in the Navy, he found his answer. Vocational counselors told him of the modern training many receive at a good school. After careful consideration he beelined for SMP. Now a skilled professional, (see right) he plans to win new honors in the lush fashion field.

By A. C. HEITZMAN

6. "Fenced in!" say many freelancers about their careers. Without the advanced techniques that stardom demands, they look with hungry eyes to SMP's world-famed ultra-modern instruction. Breaking off freelancing in Ohio, C. W. ASHLEY, JR. headed for SMP, for a flying start on a new and richer career. Confident now of his professional ability, he's off to Los Angeles—and brighter horizons.

7. This is the way to photo-success! "Springboard to fame" for careerists of all ages is SMP where specialized courses and advanced techniques are available. Tuition fees? Surprisingly moderate for complete study programs, day or evening. For outline of courses, visit SMP—or write H. P. Sidel, Director, Dept. M10.



By BERNARD McMANUS

2. Heir to a photo-dynasty is BERNARD McMANUS. Grandson of an official photographer for West Point and Princeton, son of a New York commercial camera ace, his course had long been set for SMP. Swiftly armed by SMP's famed up-to-the-minute methods, his talents flowered. In his Dad's studio, his fine technique (see above) has made him a credit to a distinguished family of photography.



By GORDON E. KING



cloud picture I recently shot with an Argus 35mm camera on Infra-red film.

The exposure was F:4 at 1/25 of a sec. with a Wratten-A filter over the camera lens. The picture was made in midafternoon and I used Infra-red film to darken the sky so the clouds would stand out better. About an hour later, two tornados lowered from the clouds and raised havoc about thirty miles away.

Harper, Kansas

DUANE HOSTETLER

He told "Pappy" how

Sirs:

At a Palomino horse show recently I saw a photographer shooting pictures with equipment that looked like it had come from a rummage sale. Since he was obviously going at the whole thing backwards, I stuck my neck out by offering him a few tips. He listened carefully to everything I had to say and thanked me when I was finished.

About an hour later I mentioned the incident to a friend, who took one look at the photographer and began to laugh. 'Know who the guy is you've been advising? That's George Boardman—an expert on shooting Palomino horses and pretty girls.'

My face is the color of a ruby safelight nowadays—the "tips" I gave Boardman were my interpretation of what he had written in MINICAM articles himself. Thank God, he's a mild-mannered man."

Los Angeles, Calif.

EVERETT TODD.

• According to our mail, George "Pappy" Boardman is quite a favorite with West Coast



amateur photographers because of his willingness to help them solve camera problems. His illustration on page 25 of the August issue, incidentally, brought so many requests for another shot of the same model that we had Boardman's assistant oblige by shooting a picture especially for this column. The scared-looking person, we understand, is the maestro himself. He's camera shy!—Ed.

Short Course at Kent

Sirs:

I was very much interested in your recent article about the Kent University Short Course
(Continued on page 110)

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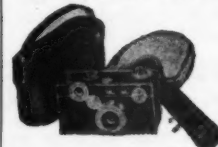
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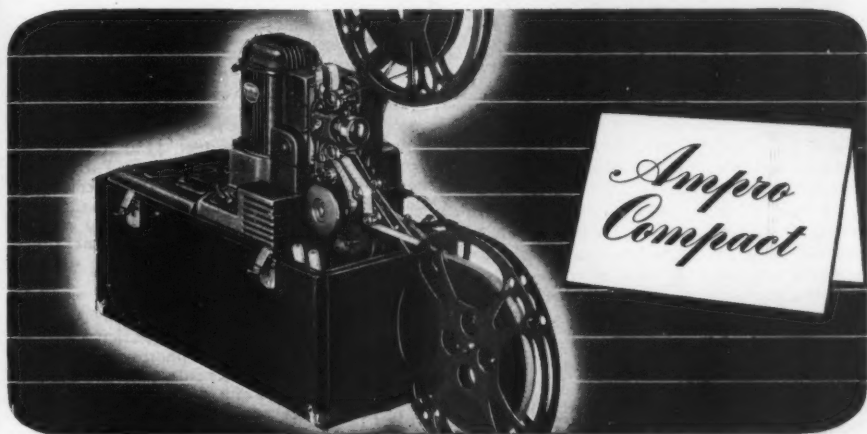
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A complete full size 16mm. sound picture projection outfit—including projector, amplifier, detachable 8" speaker and cord, plus room for extra 400' reel and film—all in one portable case. Measures only 15" x 21½" x 9¾". Speaker can be instantly removed and set up near screen for best sound reproduction.

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PHOTO MARKETS



BY MAY SULLIVAN

Look, 511 Fifth Avenue, New York City. This magazine welcomes photographic contributions from all sources—professional and amateur. Picture sets should tell, insofar as possible, a complete story. Action photos, animals, are particularly in demand. Whenever possible contributors should be prepared to send negatives. Black-and-white preferred to color. Prefer color transparencies larger than 35mm size.

American Journal of Nursing, 1790 Broadway, New York, New York, buys technical action photos of nurses in all fields of nursing. Ordinary rate of payment is made upon acceptance.

Pan American Magazine, 1150 Avenue of the Americas, New York 19, New York, is in the market for scenic shots of Latin American countries, industrial or agricultural pictures of Latin America, and pictures of typical people in the Latin American Nations. Black-and-white only—no color required. Please include return postage.

School Management, 52 Vanderbilt Avenue, New York City 17. This publication can use good school human interest photos and pictures of attractive modern schools and school activities. Black-and-white only in size 8 1/4 x 11. Payment is made upon acceptance of material at the rate of \$5.00 to \$10.00. Please include return postage.

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Collier's, 250 Park Avenue, New York 17, New York, invites you to submit pictures that are humanly appealing, humorous or dramatic. They must be strongly composed for instantaneous impact. *Collier's* intends to devote its cover to photographic slices of American life—of young people in striking story-telling situations against natural realistic backgrounds. Young men and women, children, animals and pets are high on the preferred list, but acceptable subject matter will be found in all avenues of American life, such as sports, holidays, modern living, etc. Transparencies smaller than 2¼ by 2¼ will not be acceptable. Send contributions to Bruce Downes, Photograph Editor, who says that *Collier's* will pay top prices.

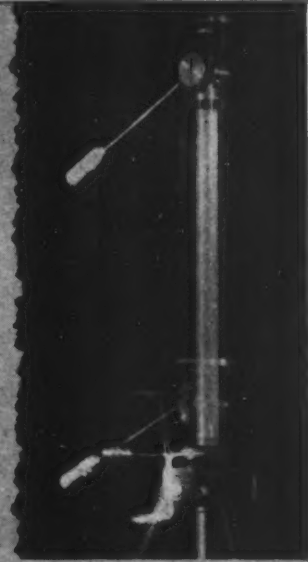
New Century Leader, published by David C. Cook Publishing Company, Elgin, Illinois, wants photographs of human and family interest, rural life, or men at work. Pictures may be in size 2½x4½ to 5x10. Payment is made on acceptance of material at the rate of \$3.00 to \$5.00 each. Please include return postage with your contribution.

Sears, Roebuck & Company, Chicago, Illinois, is sponsoring a nation-wide snapshot contest offering \$10,000 in awards on local and national levels to amateur photographers. The contest will run from October 1 to November 15 of this year. During that six-week period photographers are invited to submit their entries to their local Sears store—either in person or by mail. At the end of the local judging the four top pictures will be sent to the national contest in Chicago to compete for seven grand national awards totaling \$1,000. Rules of the contest permit an unlimited number of black-and-white snapshots in any size up to 8 by 10 inches to be entered. The subject material may include any of the following: babies and children, young people and adults, scenes and still-life, animal life, etc. Each of the six weekly winners will be given an award of \$5 in merchandise at the store. Four well-known Hollywood cameramen are among the judges named to appraise the entries submitted to the national contest for the \$1,000 in cash awards. Grand first prize will be \$500; second, \$250; and third, \$150. Should you need additional information, please contact George Vidal, Publicity Director, Sears, Roebuck & Company, Chicago 7.

The Santa Fe Railway, Room 326 Railway Exchange Building, Chicago 4, Illinois, is continuing its photographic contest up to and including September 15. This is in connection with the Company's exhibit at their first Chicago Railroad Show now under way at Burnham Park. A lengthy announcement of this contest appeared in our September issue.

AND, speaking of contests, don't forget our own Color Cover Contest, which closes midnight, September 16, here in Cincinnati. Transparencies must be at least 2¼ inches in the shortest dimensions—larger transparencies preferred. Because of production difficulties, 35mm slides cannot be considered for covers. Entries must never have been published.

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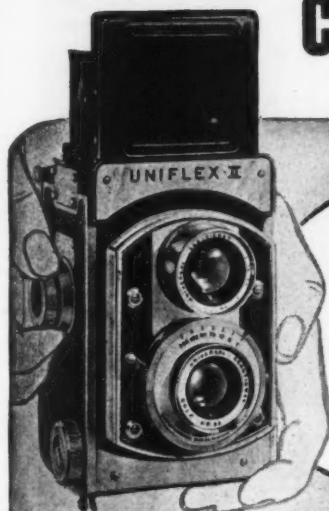
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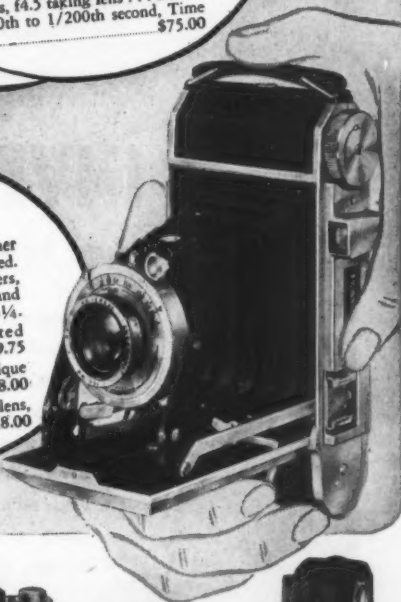
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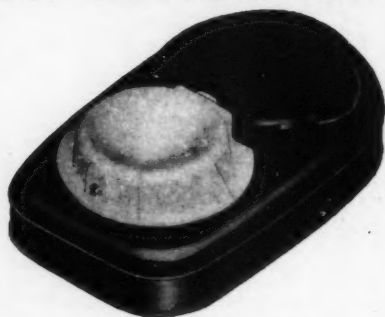
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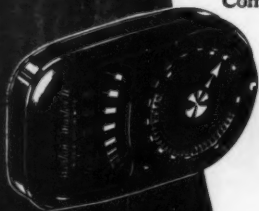


The **WESTON**
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an adapter for incident light measurements

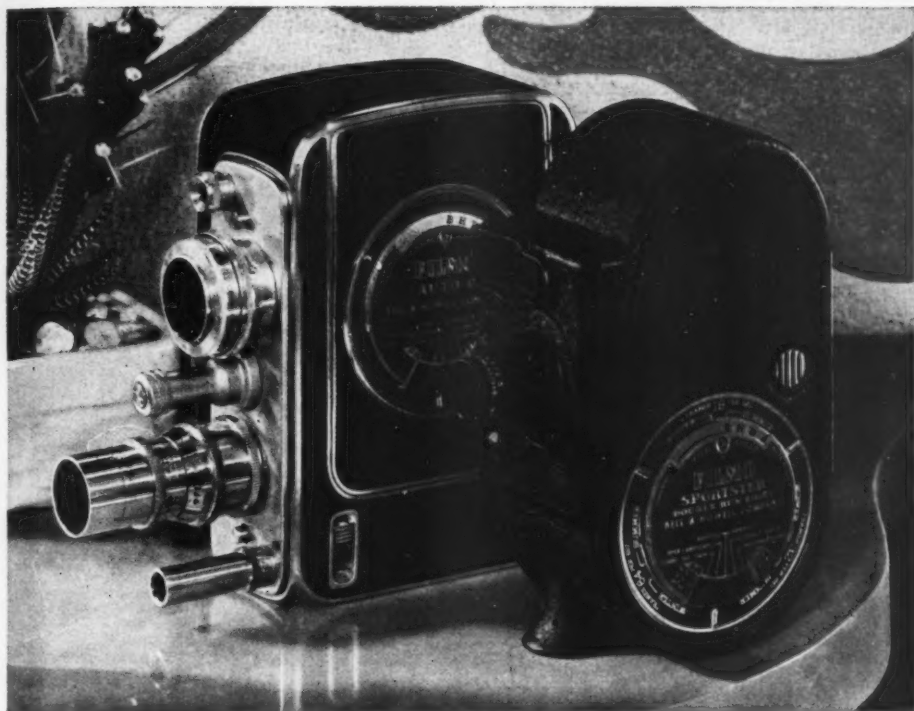
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This true-color picture of Mt. Shuksan, in the State of Washington, was made on 4x5 inch Ansco Color Film by Robert Bellile. The exposure was $\frac{1}{2}$ second at f32 in early afternoon sunlight.

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Ask for



HOW THE COVER WAS MADE

THIS MONTH'S cover was photographed by ultra-violet light at an Ice Follies show in Portland, Oregon. Here is Ray Atkeson's description of how the cover was made:

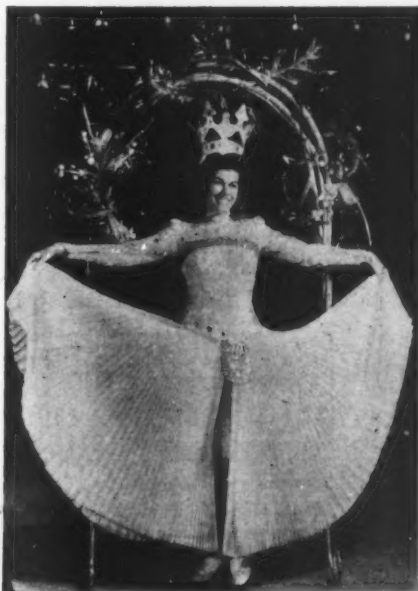
"The lighting used for the *Ice Follies*'s strange 'black-light' number consisted of ten theatrical spots and a number of overhead floods, all equipped with black-light filters and directed upon the ice arena. While the show was in progress, I made a number of snapshots with a Bantam Special which, although striking and beautiful, checked with what I had previously learned while making ultra-violet shots on an assignment for *Colliers' Magazine*; namely, that when a scene flooded with ultra-violet light is shot on color film without a filter, the effects of make-up etc., are lost in the photo.

"In order to eliminate extraneous light so that only the fluorescent materials would register photographically, I decided to use a Wratten 2A filter on daylight Kodachrome. This decision automatically raised a problem in connection with exposure time, for whereas an unfiltered shot could be made in seconds or fractions thereof—a filtered shot called for an exposure of minutes. Exactly *how many* minutes could

be determined only by trial and error.

"Fortunately, the management of the show was as anxious as I was to see what could be done with ultra-violet photography, and they cooperated by assigning a member of the cast and several lighting technicians to assist me for some shots after the show. I neglected to obtain the name of the talented young lady who posed on skates for a two-minute exposure but without her patience and understanding of the problem, the shot would have been impossible. I must admit, too, that luck played a major part in obtaining the final shot because the 2A filter forced me to guess at the exposure time. The picture was made with a Speed Graphic camera equipped with a Zeiss Tessar 5¼" lens.

"I believe other MINICAM readers might get a kick out of shooting blacklight pictures without using a 2A filter. The results will be different, of course, but they are certain to be as interesting in their own right as a filtered shot. And as for the comparative grief in making them—there is no comparison!"



THE COVER picture was shot by ultra violet light. This is a comparison shot of the same girl made with ordinary flash equipment.



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use the minus time

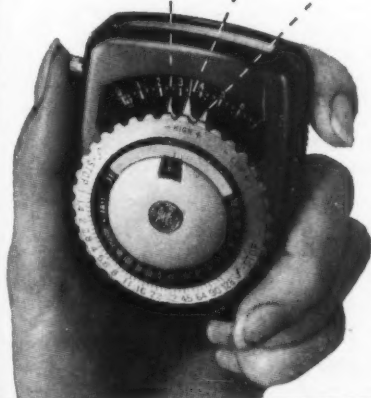


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and background
use this time



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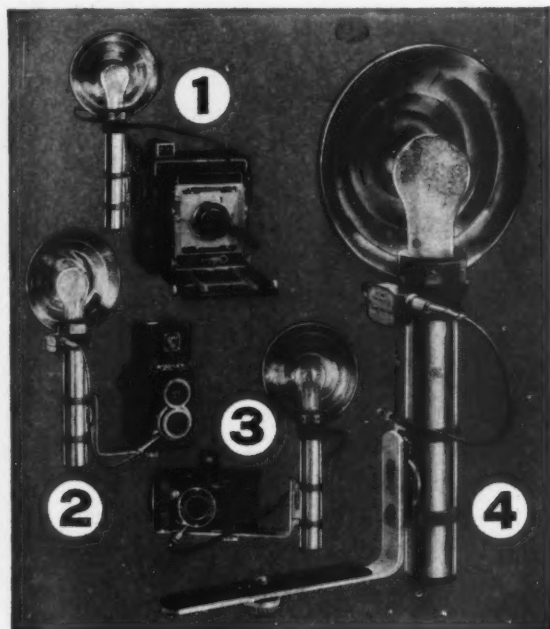
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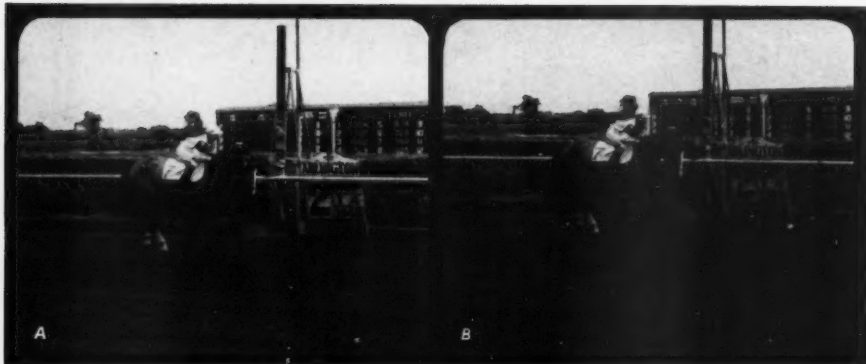
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Double Exposure Safeguard	✓	✓
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*The CLARUS Performance Comparison Test was made by Arthur E. Haug, eminent free lance photographer for leading national publications and air lines... author of current pictorial best seller, Chicago. For complete details of this amazing test, write for free booklet, *Candid Camera Thrills with CLARUS*.



**Picture on right was taken with CLARUS, Model MS-35.

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BIG PRINTS

with a sparkle

BY KARL A. BAUMGAERTEL

THE DIFFERENCE in print quality between a good picture and an outstanding picture sometimes hinges upon a simple twist in processing technique that only a few photographers know about. Such procedures are carefully guarded and, being valuable in maintaining the user's prestige, are almost never divulged in print.

I know of one such procedure which, although far from being new, has almost been forgotten in recent years. Its chief value is to put sparkle into print quality—to restore some of the brilliance often seen while a print is wet, but which is lost when the print becomes dry. The same process is also useful for obtaining warm tones in a print or, if you prefer them, cold tones that have unusual richness.

This process consists of a variation of a formula for a chromium intensifier. The degree of intensification, though very moderate can be stepped up considerably when desired by a simple change. The solutions are easy to prepare and, since the measurements are not critical, do not require the use of scales if none are available. I will give the formulas first and then outline their use.

For the first solution, a bleach, mix the following:

Water	20 oz.
Potassium Bichromate	1/4 oz.
Hydrochloric Acid (Tech)	1 oz.

The diluted acid is not harmful to the skin, but as with all photographic solutions it is just as well to keep your fingers out of it as much as possible. If you have no scales, buy the Bichromate in 1-oz.



PAUL K. PRATTE

Brooklyn Museum



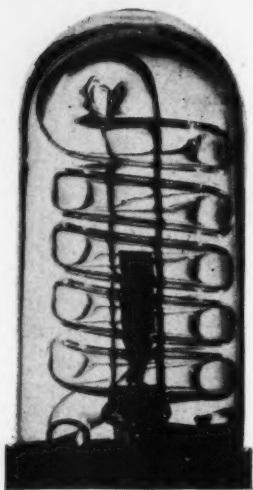
SUPERB print quality alone doesn't make a picture, but when good subject matter is given the benefit of expert processing, the picture is bound to sparkle. Note how the delicate gradations of tone between black and white have been retained in this beach scene by Andre de Dienes.

bottles, (available from your photo dealer or most chemical supply houses) divide it into four equal piles on a piece of clean paper and use one of the parts each time you mix a fresh solution. Be sure, however, to keep the unused Bichromate in a tightly closed bottle.

The degree of intensification depends upon the length of time the Bichromate has to work on the print; if considerable intensification is wanted, use twice as much Bichromate and only half as much

acid. The more Bichromate and the slower the bleaching action (less acid) the greater the degree of intensification, and vice versa. This solution keeps quite well in a corked dark bottle and can be used again and again until it loses its life. It can be replenished (only once is recommended) by the addition of one quarter of the amount of acid originally used. The formula with more Bichromate

(Continued on page 126)



XENON-GAS FILLED BULB

Speed light at 1/5000

THE BETS had been laid and tempers were at white heat. The disturbing question? "Does a trotting horse have all four feet off the ground at one time?"

To settle the bets, and douse the tempers of his California friends, Leland Stanford, the railroad magnate, hired an itinerant English photographer, one Eadweard Muybridge, to photograph a trotting horse. This was in 1872. With typical photographer's luck Muybridge's first trip out resulted in a darkroom filled with useless negatives. He had either missed the horse completely or ended up with shots of the mane or tail. Then, as now, it was a problem of timing. So Stanford called in one of his engineers, John Isaacs, to devise a timing system. The next time the horse ran, a battery of cameras were lined up along the course. There were special shutters operated electrically which enabled Muybridge to make the first series of speed shots.

The results were sensational, and proved that a trotting horse *did* have all four feet off the ground at one time. Muybridge was made. From that time on he photographed all kinds of creatures—elephants, deer, men and kangaroos.

But for practical purposes the picture-hungry public had to wait until 1931 to see the brilliant, practical pictures of Dr.

Harold E. Edgerton and his associates of the Massachusetts Institute of Technology. His gas-filled bulbs used for this motion freezing photography look like neon tubes. They produce a brilliant flash, brighter than sunlight, of extremely short duration and they can be used over and over again.

From a cumbersome assortment of electrical gear and lights, necessary in the first experimental pictures, we have made progress. Today you can sling a seven pound battery powered speedlight over your shoulders and walk out of a camera store and start making high speed pictures for less than \$100.

The Questions Photographers Ask

Q.—What do you mean by high-speed light?

A.—"High-speed light" is a flash of light of about 1/5,000 sec. duration, operating in synchronization with the camera shutter. Some commercial units go as

PIVOTING on a split-second this photograph of a skater has the speed and hair-splitting sharpness that only a speedlight could give. A 500 watt-second unit was used with 3 lights set high above the area used by the skater.

Photo by Hugo Gorski-Milwaukee Journal from
S-R Strobe

*freezes it
of a second*



slow as 1/2000 sec. and more go up to 1/10,000 sec.

Q.—What makes the flash such a short duration?

A.—Let's look at the outfit first. A high speed light unit contains two elements; a spiral tube averaging about 3 inches long containing a gas such as Xenon - - - -

Q.—What?

A.—Xenon is a native gas found in the atmosphere. There's one part to twenty million parts of air. If you want to buy some it will cost you about \$80 a litre (approximately a quart).

Q.—This 3-inch spiral tube then is filled with Xenon gas. Why?

A.—When a charge of several thousand volts passes through the tube, it - - - -

Q.—Who makes these bulbs?

A.—Amglo, General Electric and Sylvania, and they sell for \$14 to \$25. The tube lasts for 10,000 flashes up, at any rate the photographer should have grey hair by the time it wears out.

Q.—I suppose more bulbs are broken

THE ANALYTICAL POWER of the speedlight gave Spaulding this impact picture showing what happens to the tennis ball and the strings in an overhead smash.

Photo by Dr. Harold Edgerton



PEEPER'S LEAP

"WE WERE LIGHTING after-dinner cigarettes when my wife noticed a "peeper" frog on the outside of the dining room window pane. He'd set his table where the branches brush the house, and was busy gobbling up every insect attracted to the window by the lights inside. The Rollei flex, a set of Proxars, and two speedlights did the rest.

"An unappetizing sight, the voracious little frog apparently clung to the glass pane by means of suction cups on the ends of his toes. He would wait quietly until a tempting bug fluttered close—then a lightning leap—and the bug was nothing but a few aimless writhings in the tree-frog's gullet.

"Speed lighting was the only way to freeze the extraordinary speed of the leap itself.

"I hooked up my Wilcox portable speedlight outfit, with one additional extension, flicked the switch 'ON,' and clamped two light units to a chair and a door jam. Each was about three feet from the frog and a rough 45 angle to the camera, one on each side. I fired them a few times while checking the Rollei ground-glass, and changed the angles of the light units slightly to get rid of flare reflections in the window pane.

"By slipping on the Proxar set, I was able to get a larger-than-normal image of the frog on the negative, with the result that the 11 x 14 print did not show the mushing-up of tones and details from 'over-enlarging' that often occurs when trying to picture tiny subjects.

The camera was loaded with SuperXX film, diaphragm set at f22, and the shutter at 100th sec. (The shutter speed is unimportant when shooting with speedlights against a dark background and in ordinary room-lighting. It's the 1/5000th sec. that takes the picture.) My wife shone a flashlight on the frog's white belly for my focusing, and I began exposing shot after shot, trying to capture that elusive leap.

"Our frog remained obligingly within the frame of one window pane. Small wonder—he must have eaten his weight in insects during the half-hour he modelled. But he had one big edge on me. He knew when he was going to jump. With the average human brain-to-hand reaction time being about one-tenth of a second, I found my opponent would grab a bug, and already be looking around for a second helping by the time I'd get around to pressing the button.

"I made twenty-three shots and knew I hadn't stopped him in mid-leap; but I was beginning to notice the little, different ways he had of moving his muscles and poising just before the leap. The coffee was getting cold and I was cramped. A fat moth clumped against the glass, and I got the 'peeper' frog."

—Joe Munroe



ELECTRONIC FLASH EXPOSURE DATA

The assigned ASA speed ratings of emulsion materials are not applicable when a speedlight is used as the light source. This is due largely to the varying degrees of failure of the reciprocity law with various emulsions, and to the more favorable response of certain emulsions to the exceedingly high-peak lumen output of electronic flash lamps. Some of the lower resistance, self-ionizing type lamps exceed 50 million peak lumens. It is therefore necessary to assign special guide numbers to emulsions for speed light exposure.

The table below shows approximate guide numbers for various film groups. These guide numbers will permit the user to establish an approximate exposure for initial tests. They are based on the use of reflector arrangement of average efficiency.

The individual user should establish his own specific guide numbers, using the information shown as a starting point. Like any other exposure table the exact guide number set-up will depend on development procedure and materials, reflector efficiency, and other variables. The data below, however, are correct for average conditions.

The average low-cost portable electronic flash unit is light in weight, and somewhat low in energy input, usually ranging from 50 to 60 watt-seconds. The highly engineered models, however, pack a terrific punch, sometimes twice these figures, due to carefully balanced electrical characteristics and reflectors especially designed for use with electronic flash lamps.

EXPOSURE GUIDE NUMBERS FOR ELECTRONIC FLASH

Film Group No.	Watt-second rating of unit (usually given with instructions)									
	40	60	80	100	120	140	160	180	200	250
1	115	140	160	180	200	215	230	240	255	
2	95	115	135	150	165	180	190	200	210	
3	9.5	11.5	13.5	15	16.5	18	19	20	21	

Film Group 1

Isopan
Panchro-Press Type B
Tri-S Pan
Supreme
Plus-X

Film Group 2

Tri-X-Pan
Superpan Press
Verichrome
Panachrome
Super XX

Film Group 3

Daylight type color materials

This data was based on hundreds of test exposures and densitometer measurements made by the Research Laboratories of the Anglo Corp. A wide range of equipment and developers were used.

Guide numbers for color film are based on the use of a CC15 color compensating filter for Daylight Kodachrome, and equivalent filters for other color materials.

The average portable unit sold complete is rated at approximately 60 watt-seconds. However, due to precise design of the modern speed light reflectors, (especially calculated to take advantage of the shape of the Xenon tube) the efficiency of the unit is considerably increased. When using these units, it is possible that the guide number used can be that corresponding 80 watt-seconds.

The manufacturer's watt-second rating of a lamp is dependent on its ability to handle energy input. The ratings given are conservative and energy input values twice those indicated are often used, although this results in diminished lamp life. This is particularly true if the flash is repeated very often. In cases where higher inputs than the lamp is designed for are going to be incorporated, it is advisable not to flash the lamp without at least a minute's time intervening. Several closely spaced flashes are quite practical, when necessary, but this procedure should not be repeated too long as the resulting heat and strain will weaken the bulb.

While electronic flash manufacturers usually supply watt-second ratings it is possible to calculate this from data on the electrical characteristics of the unit. Watt-second input is based on two factors, capacity and voltage. It is easily computed by multiplying the capacitance (MFD) by the voltage (kilovolts) squared, and dividing the product by two. As an example, a unit using 50 MFD and 2000 volts would have a watt-second input of:

$$\frac{50 \times 2^2}{2} = \frac{50 \times 4}{2} = \frac{200}{2} = 100 \text{ watt-seconds}$$

Flash duration can be approximated by using the factors of capacitance (MFD) and the average resistance during ionization. Multiplying the two together provides the answer in micro-seconds (millionths). One popular self-ionizing lamp, for instance has a resistance of 5 ohms when used with a capacitance of 30 MFD. Multiply 5×30 and you have a flash duration of 150 micro-seconds. In the voltage and capacity range, the color temperature of the light output will remain closely constant at 6500 degrees Kelvin. This value is close to optimum for daylight balanced film types.

by dropping than are exhausted by actual use?

A.—Yes, to date no one has heard of one wearing out; few have been returned as faulty.

Q.—In addition to this bulb—what else do you need to take speed light pictures?

A.—An electrical power-pack. - - -

Q.—Sounds like something a superman lightning bug carries—what does it do?

A.—The purpose of the power-pack is to supply the power that ionizes the Xenon in the spiral tube, so it gives off a flash of light. There are two kinds of power-pack—one is plugged into the AC circuit; the other gets its power from two batteries of two volts each, carried in the unit itself.

Q.—What do they weigh?

A.—The AC unit weighs from 10 to 35 pounds and the battery units from 5 to 12 pounds including the batteries. These are both portable.

Q.—All day portable?

A.—That is what photographers get paid for.

Q.—I imagine both the tubes and the power-pack are delicate.

A.—The tubes won't bounce, but, they are as durable as an ordinary electric light. The power-pack itself, is about as tender as an ordinary radio.

Q.—Is the power-pack unit like a radio?

A.—Yes. The circuit follows that of an ordinary radio. It contains a transformer which steps up the 110 volts line current to approximately 1600 volts AC. The current then goes through 1 or 2 rectifying tubes which change the alternating current to direct current and increase it to 2,000 volts or more. This current is then stored in a condenser.

Q.—What is a condenser?

A.—You could compare the condenser to a water tank only in this case electrical energy is stored. This stored energy is expressed in "watt-seconds."

Q.—How is the current released from the "storage tank," or rather what you call a condenser?

A.—The problem is to let the watt-second energy pulse into the Xenon tube.



ONE 60 watt-second speedlight was used to stop this shower. Photo by Jos Munroe



"BASKETBALL BALLET" was made with a speedlight attached to camera.

Bob Long—Anglo

BALL-SNATCHER was caught with a portable speedlight. Photo by M. Giesler from Anglo





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EXTREME CRISPNESS is a quality that speedlight gives to negatives. In this Rolleiflex shot of Joe E. Lewis notice the extreme depth of focus from the back of the ear to the hand. *Photo by Robbins—True Mag. from Anglo*



▲ **TO MAKE** this 4x5 Graphic shot of a bird being fed with an eyedropper a 150 watt-second unit was divided between two lights. *Photo by Sochurek—Milwaukee Journal from S-R Strobe*

Q.—How is this done?

A.—There are two methods—one type of Xenon tube requires a high voltage current to be passed through it, and to flash it an even higher voltage “pulse” is passed through it. The extra pulse comes from a “trigger” tube. This type of speedlight works with a “no-delay” shutter synchronizer only.

The other method uses the open spiral, self-ionizing Xenon lamp. Flashed by a relay connected in series, these lamps do not require the usual 10,000 to 15,000 volts for triggering. The lamp cable stays free of high voltage except for 1/10,000 second flash time. These tubes are very easy to synchronize to regular flash bulb synchronizers. They are used often in portable units because they pack more punch in lighter weight.

Q.—Then this outfit will take pictures at 1/5,000th. sec. What good is it?

A.—The speed light will stop action that the flash bulb couldn't begin to stop.

Q.—For instance?

A.—A high speed light will stop the action of an ordinary house electric fan. A flash bulb will not. A speed light will stop the action of a drop of milk falling into a pail of milk. Flash bulbs will not, unless you are working with a 1/1000 of a second focal plane shutter.

Q.—I don't understand?

A.—There are two ways to stop fast action. Bright light with a very fast shutter, or any kind of shutter plus a brilliant light that goes on and off in a split second.

Q.—Could I freeze the blades of an electric fan using a box camera and a speed light?

A.—Sure. Open the shutter on “Time” in subdued light; fire the speed light, and close the shutter.

Q.—Then the first advantage of the speed light is that it will stop action that a flash bulb would not stop. Tell me more?

A.—In terms of actually taking pictures, this super-fast light means you'll

get no more fuzziness due to "hand-held movement" on indoor shots. A tripod isn't necessary. The speedlight increases the photographer's freedom of movement because it removes both the variable of shutter speed, and the need for that old standby "Hold it."

Q.—Are there other advantages?

A.—A speed light can be flashed for more than 10,000 times and a flash bulb can be used only once. No burned out, hot, bulbs to change. No hunting around for a waste basket or a secluded corner to dump the used bulbs. There's an economy factor here, too. While no one claims the speed light will eliminate the need to buy flashbulbs, it has been estimated that, for example, an amateur who likes to take a lot of flash pictures can pay for a speed light outfit in a year out of flashbulb savings.

Q.—Any more advantages?

A.—Yes, there is one additional advantage that every photographer will appreciate who knows the limitations and frustration of all mechanical equipment. The speed light delivers to the photographer an unvarying amount of light on each shot. The photographer knows exactly what he will get each time.

Q.—I thought this was true of flash bulbs also.

A.—Yes, it is true of the flash bulb, but the shutter of the camera will vary considerably. If you take any ten cameras that are in daily use and shoot each one at 1/100 second you will get a considerable variation in shutter operation. This does not interfere with your results when you use a speedlight, because the light itself lasts only 1/5000 of a second, so it does not matter if the shutter is a little faulty as long as shutter is open at time of light flashing. The speed light is what stops the

COLOR SET-UP used by the Milwaukee Journal to shoot color on Kodachrome. There was 9000 watt-seconds of light; the aperture was F:6.3. Five speedlights were spaced around the players, each approximately 20 feet distant. *Photo from S-R Strobe*



LIKE A limpid stream, the skim milk seems to curl down to these farm cats. Here a single speedlight on a Wilcox Unit has been balanced with the daylight. *Photo by Joe Munroe*



action—the speed of the shutter is of no consequence.

Q.—Is this always true?

A.—Only when an auxiliary light does not enter into the picture.

Q.—There it is! Always a “bug” in the works somewhere. Better give me that again.

A.—The only thing the speed light can be depended upon to give you is constant lighting if it is the only source of lighting in the entire picture. If you are taking a moving object outdoors using a speed light at F:4.5 at 1/100 of a second you may get one image from the speed light, and a ghost image made by the light of the sun.

Q.—Then would you use the speed light out doors?

A.—You can use it outdoors on moving objects when you have a fast enough camera shutter speed to stop the action. Or if the light is very dim you are all right, for then the speed light is the main source of light. Or if you can move up close to your subject so that you can use a small F stop, your lighting is mostly from the speed light.

Q.—How about using the speed light indoors at a boxing ring when the ring is lit by very powerful lights?

A.—Usually a photograph made at the ringside, under boxing lights at F 4.5 1/100 second will give you a ghost image. But stop down to F:8 and get in close to the boxers—say about 15 feet away—you can use the speed light and escape a ghost image.

(Continued on page 116)



CHARCOAL-DRAWING effect of this print from the sharp negative, below left, was obtained by making a large, fully exposed blow-up on matte paper. You can make any negative grainy by deliberately overexposing it slightly and developing it in a high contrast developer such as D 72 or D 11.

A STRAIGHT, SHARP print from a correctly exposed negative, below left. The center shot was made under the same conditions but dipped in hot water after washing, to cause the reticulation. You may get a mild version of reticulation by having 10 degrees or more difference in developing, fixing and washing temperatures. The effect shown on the right was obtained by using a Duto screen.

GRAIN

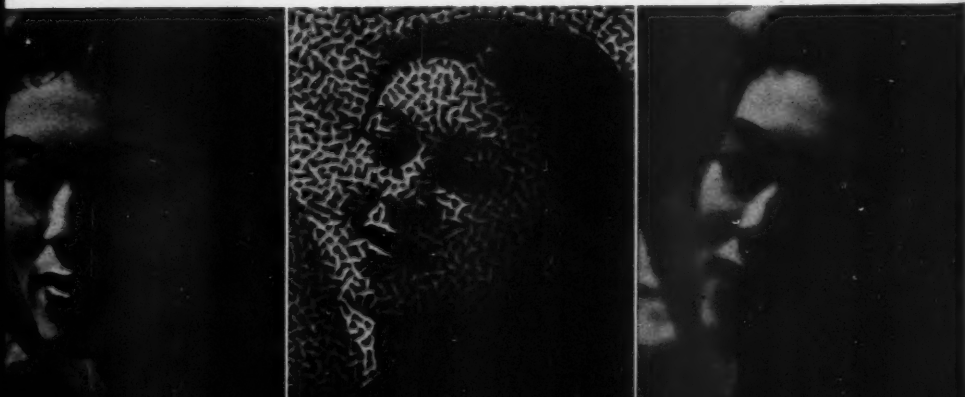
isn't always bad

IN 1937 the anti-grain feeling in photography was so intense that many a good prints never saw the light of day, but instead was doomed to remain a negative forever. If the texture of grain was visible in an 11 by 14 inch blow-up the technical pride of the photographer forbid him from going further with it.

Meanwhile, the press photographers were going their own carefree way, dunking negatives for a couple of minutes in a hot soup, often having a print in 10 minutes. They were immune to any criticism, from the standpoint of grain, for the coarse half-tone screen used in printing the pictures wiped out grain along with a great deal of other detail, in the final result. The news angle was there and so was the action. The pictures did their job, and well.

It took the war to cure photographers of their "grainitis." We became aware of the *subject matter* of the photograph; Normandy Beach-head shots and gun camera blow-ups that looked as if they'd been sand-blasted became acceptable.

Grain, reticulation and soft focus are specialized photographic techniques; once we know how to control them they can be put to work to make fine photographs. That we have grain unavoidably, on a negative, is no reason to throw it away. Try it for its subject matter, as a picture.





AN AFFECTIONATE FAREWELL of two girls at the Paris bordello *Le Sphinx* the night before it was closed, to be made into a student's residence club. A grain conscious photographer might never have printed this social document showing a rare moment of consolation. It was made with a 35-mm camera on fast pan film by the natural mazda light.

Photo by E. Kammerman-Pix

October Pictures

by Thomas Bouchard

*I never saw the man who looked
With such a wistful eye
Upon that little tent of blue
Which prisoners call the sky.*

Oscar Wilde



THE MODEL'S BACK

by Andre De Dienes





TREE NYMPH

by Andre De Dienes

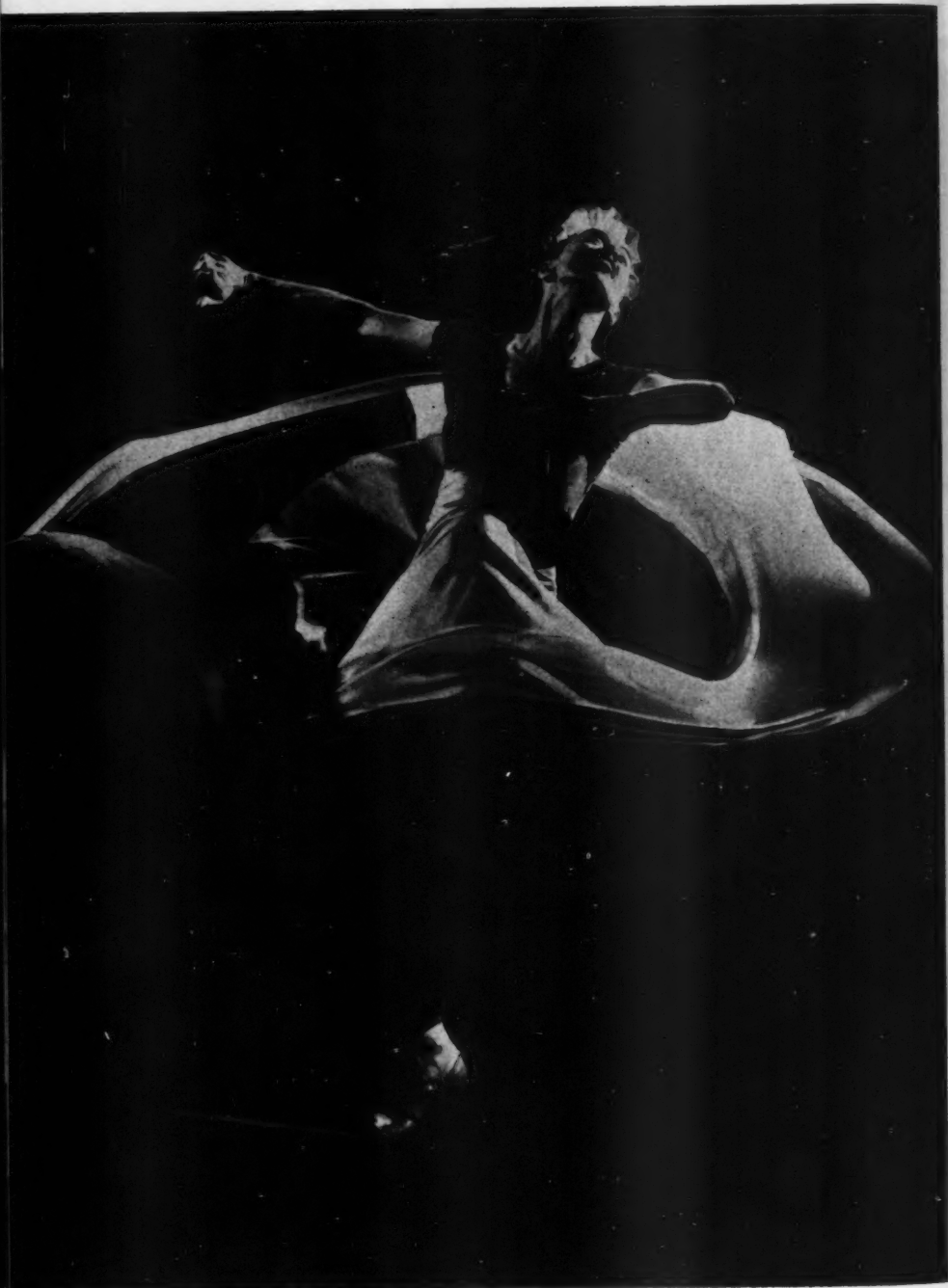
DOUBLE PRINTING of two negatives: a statue and a woodland scene, enhances the statue's dreamy quality.



enes

THE LONG ROAD HOME

by Knopf-Pix



RUSTLE OF AUTUMN

by Gjon Mili—Brooklyn Museum



"MY NAME IS JENNIE"

by Robin Carson



MANHATTAN UNDERGROUND

By Edw. Burks—FPG

FRED LOVES RITA

By Bernard Cole





COLUMBUS SQUARE

By Fred Stein

*The monolith honoring Columbus at 57th St., New York City,
is now dwarfed by the overlapping canopies of advertising.*

**Its fun to earn money
with your camera**

Vegetable Faces

BY ANNE J. ANTHONY

DOES the red, puffy face of the bartender at the local bistro remind you of a tomato with eyes? Or when you hold a green pepper a certain way does it take on the features of the cute young thing at the cigar counter of the corner drugstore? Hold it at another angle and your mother-in-law is liable to pop out at you!

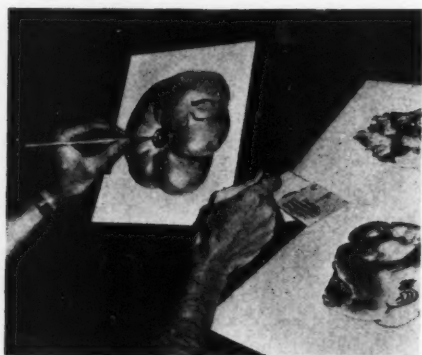


Fig. 1

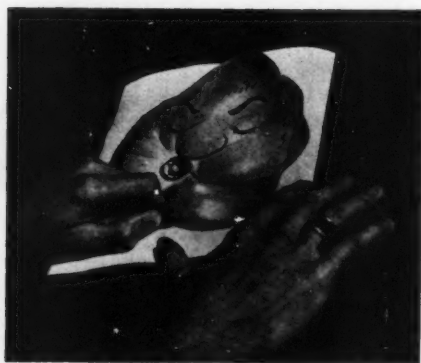


Fig. 2

With a minimum of materials and a dash of imagination you can discover a wealth of possibilities in vegetable faces. And if you are looking for a way to help make your photographic hobby pay its own freight, this is like finding money. Sell photographic vegetable faces to fruit and vegetables stores, to produce departments in chain grocery stores, and to ad agencies who are running campaigns for various kinds of grower's produce. Or with a few samples to show, call on delicatessen owners, cafe operators, open-air street markets, or produce wholesalers. Whoever sells vegetables either fresh, or prepared for consumption, is a cash prospect. Beyond that, photographic vegetable faces make appealing home decorations that can either be sold or used as gifts.

A camera, a couple of lights, an enlarger, and a few inexpensive house tools are all that are needed for making vegetable faces. The first step is to photograph the tomato, egg plant, squash, or whatever other vegetable you have selected to experiment with. Use a light background behind the vegetable and avoid harsh cross shadows. The main thing is to choose a camera angle that accentuates the natural bulges and hollows of the subject. These bulges and hollows, as interpreted by the camera, are what give your subject "character."

Make several 8 x 10 enlargements of each negative you expose on single-weight matte paper. When the prints are flat and

(Continued on page 112)

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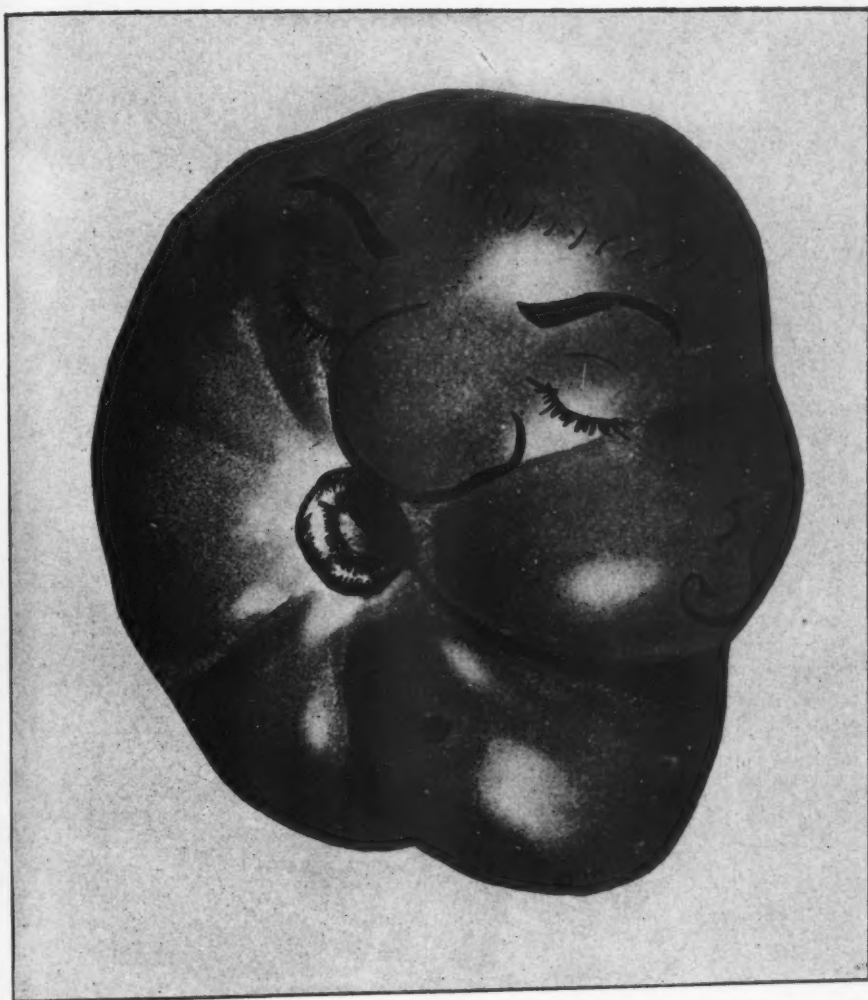


Fig. 3



Fig. 4



Fig. 5







The Pro Selects His Best

A selection of photographs made by the members of the Society of Magazine Photographers from their forthcoming book, "Photo-Graphic '49".

"YOUNG MAN," said the editor gruffly, "make sure you bring back good sharp pictures on this story."

"Yes, sir!" said the photographer, fishing up an answer he was sure was good for a laugh. "Don't you give it another thought. I'm using Eastman's special Sharp Film today."

"All right," the editor replied, turning back to his handbook on photography, "that's fine."

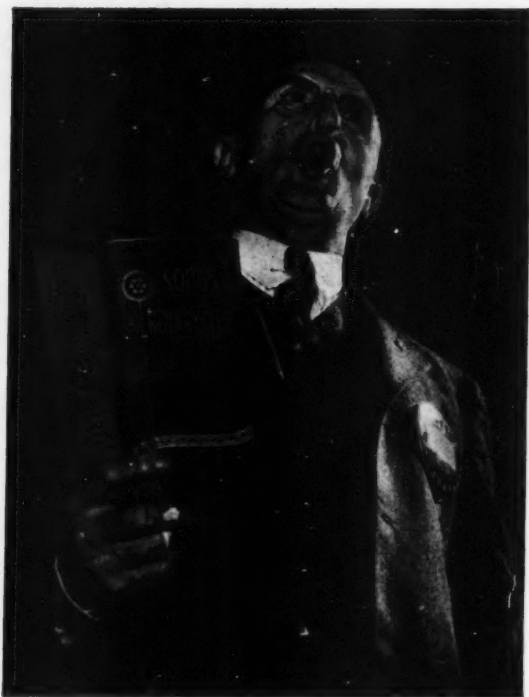
From time immemorial, editors have been accused of all the varieties of stupidity in the book. Magazine photographers bite the hand that feeds them whenever the opportunity arises. The photographer hasn't looked into ground glass who doesn't have his favorite anecdote about what this preposterous editor said to him and what he said to this editor.

For instance, there's the famous war correspondent who was risking life and limb weekly to cover the Pacific war. As a follow-up to one particularly dangerous set of pictures, he got the following cable

TREE, CENTRAL PARK

ERICH KASTAN

IT WAS A RARE DAY of unexpected snow that lured the photographer into the park from his usual studio-to-lunch path. He took his Rolleiflex with him, "just for the heck of it." Exposure was 1/25 at f 11; the film happened to be Superpan Supreme; K-2 filter.



MIDDLETOWN

IKE VERN

This photograph was actually made in Middletown—Ohio. Rotarians said it expressed their good fellowship; others thought it a commentary. Rolleiflex; two #22 flash; 1/250 at f 22; Super XX film.

from the home office: NEXT TIME YOU
MAKE A LANDING TRY TO GET MORE LIGHT.

Magazine Photography is New

Some fifty years ago magazines were “using” photographs in a haphazard fashion. Pictures seemed to have no other function than to prove that what some part of the text said was true.

It was not until the 1930's that editors began to pay somewhere near as close attention to editing their photographs as they did their text material. Even then, the photographs remained stranded and apologetic, a slightly lower class art.

However, with the advent of the picture magazine, specifically, *Life*, in 1936, and the others soon afterwards, a demand was created for significant related pictures. The overwhelming publishing victory of pic-

torial journalism gave photographers a hot foot.

Editors soon found that getting the kind of photographs they wanted involved hiring photographers who were expert at making them. This necessity drew from other fields a corps of men and women who were capable of creating stories in pictures and of dramatizing editorial concepts and who were as specialized—or as versatile—in their various talents as the magazine writers. A new profession was born.

Soon other facets were cut. The fine photographers driven to this country by the Fascist strangulation of freedom in Europe brought with them a greater consciousness of the value of social comment photography. The public became picture-



GREEK CHILDREN, CRETE

MYRON EHRENBERG



GAMBLER, LAS VEGAS

A detail captured in 1/200 of a second, makes a strong social commentary. Patience coupled with an alert sensitivity caught a dynamic emotional event and told a whole story. Speed Graphic with 127mm Ektar; f 11; Super XX; #5 flashbulb.

ARTHUR ROTHSTEIN

wise. More and more, stories were allowed to stand independently, without the crutch of text. The hidebound tradition which forced an editor to caption a picture of a man riding a horse, "This is a man riding a horse" gave way. Gradually the concept that the written word can embroider the photograph, instead of the reverse, was accepted.

And the magazine photographer—with his little reflex camera, imagination, ability to dramatize editorial ideas and to bring back exciting picture stories where the

nonphotographic eye would see nothing happening—is a new kind of interpreter of life who takes his place with the writer, the reporter, and the painter.

He records facts, spins fancies, and portrays beauty.

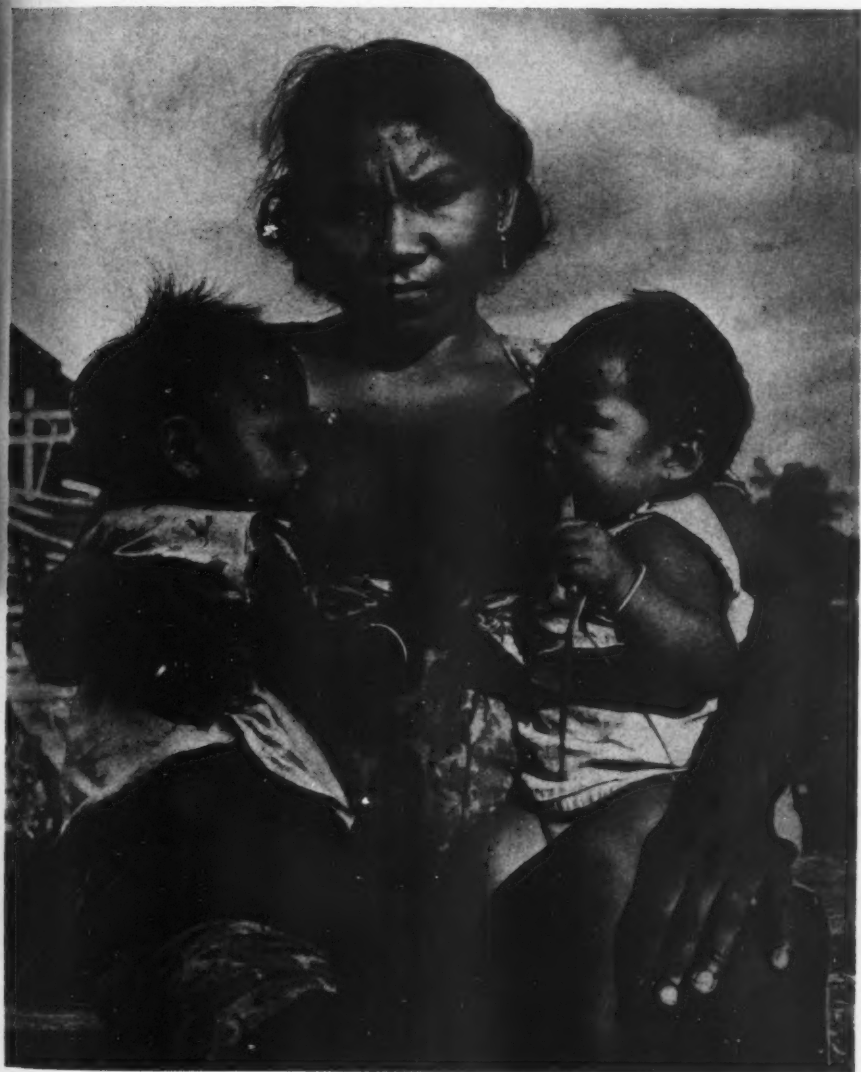
The Boys Got Together

Three years ago those of this new profession of magazine photography became sufficiently well defined and self conscious to form the American Society of Magazine Photographers. The Society today

"When I first saw this, in Surinam, the group was in deep shade. By the time I got them moved, one little girl had got her fill and was fascinated by the camera. The other kept throwing me mad looks. There was one instant when both were absorbed in their job." Rolleiflex; 1/100 at f 11.

BUSY ARAWAK FAMILY

EARL LEAF





MIDTOWN MISHAP

TED BURROWS

Part of one of those projects a photographer never completes; in this case a series of pictures of the things you see in back windows. Burke & James Press, with f 4.5 Ektar; 1/50 at f 11; Super XX.



DiMAG

GABRIEL BENZUR

"DiMag is neither a camera-hound nor lens-shy. Get him best while doing something—batting, autographing." Rolleiflex; 1/250 at f 11; Superpan.

has a membership of two hundred twenty-five out of an estimated three hundred who derive their incomes from editorial work for national magazines. The purpose of the Society is to build the prestige of the profession in the public's somewhat jaundiced eye, and their first collected public showing of "best work" will be published next month under the title of "Photo-Graphic '49."

Often forgotten by the public and the amateur photographer are the sad facts that a professional must shoot, rested or tired, well or sick, in the mood or not. He must shoot subjects in which he is not interested as well as those which appeal to him. It means being nice to nasty people and being firm to nice people. It means being editor, prop man, actor, scenario writer, world traveler, and constant public relations man.

Then too, there is the preposterous circumstances that the professional must, in the course of the year, shoot the same picture over a hundred times and make it look different each time. *Colliers* may assign him a story which calls for a picture of a real estate man talking to a client over a desk. The next day, for the *Post*, he may have to shoot a banker talking over his desk to a G.I. And in a week, a union leader talking to his assistant or a government official being interviewed by the press. The elements are the same—two men and a desk—but the pictures must be different, and it's up to the man behind the camera.

He must travel everywhere, lose sleep, eat on the run and yet keep his imagination alert, his critical senses active for each job as it comes. He must, like a movie director, plead and act and talk to keep the family group from leering frozenly into the lens. He must keep the kiddies from snatching the hot bulbs and he must, for the thousandths time, explain why he's carrying such a "little camera" instead of one of those big professional-looking things the local newspaperman has.

He must play petty politics in small towns and avoid being sold a bill of press-agentry goods in big ones. And with all

this on his mind, he must take better pictures than the man who, after a good lunch and a nap, wanders down the Old Mill Road after a snowfall and gives his all for a salon print.

They have model trouble: Nelson Morris found just the bewhiskered, grimy old salt he wanted as a subject for a fishing story. While he was sitting up on deck, his model disappeared below. Five minutes later he reappeared proudly decked in a clean shirt and minus every whisker.

Is There Any Money in It?

How does the professional stack up economically and professionally? Outside of thirty-five who work for *Life* and fourteen for *Look*, only a handful are on the staff of magazines. Probably ninety-eight per cent of magazine work is done on assignment, with the magazine committing itself in advance.

Speculation, or shooting pictures and then submitting them for acceptance or rejection, is frowned upon by almost all professionals as a danger to standards, although no photographer will pass up a good story happening under his nose simply because no editor has assigned it. Occasionally, also, a photographer will do a story on his own hook because he knows that no editor will be able to visualize its potentialities in advance.

Most of the Society's free-lance men work through an agency which, for a very healthy slice of the take, sells their talent to magazines, routes their assignments, does their darkroom work and procures their working materials. The agencies are comparable to the more modest ten percenter who handles a free lance writer.

Since the profession is most closely allied in structure with magazine writing, it may most easily be compared with it. Percentage-wise, there are fewer magazine photographers starving, but by the same token, there are fewer wealthy men. Magazine photography pays anywhere from one hundred dollars a week to fifty thousand dollars a year. The rate for the average journalistic photographer is one hundred

(Continued on page 145)

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HILLS AND SEA . . . The softly rounded hills, the back-lighted sea stretching out to the rim of the world, the feeling of tremendous space (how small the horses; how tiny the ship!) . . . here is a "shot" to inspire the worker in black-and-white to discover for himself the satisfaction and rewards of an excursion into color.

Kodak color includes Kodachrome Film for most miniature, sheet-film, and home-movie cameras . . . Kodacolor Film for most roll-film cameras . . . Kodak Ektachrome Film for processing in your own darkroom.

It's Kodak for Color

Kodak

BULLETINS

NEWS OF KODAK PLANS AND PRODUCTS

ACCENT ON "MINIATURE"



Basic instrument is a Kodak miniature camera, such as the Kodak Flash Bantam $f/4.5$ Camera (above, with accessory Kodak Flashholder) or a Kodak 35 $f/3.5$ Camera, Range Finder Model (see back covers of most October photo magazines).

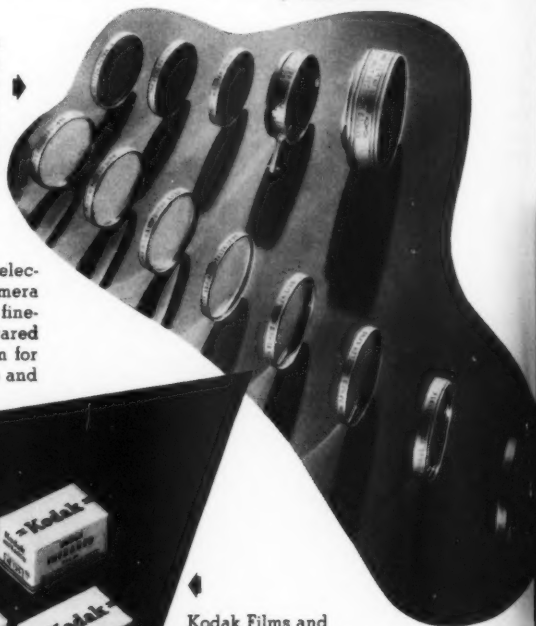
COMPACT CAMERAS... tiny needle-sharp negatives and full-color transparencies... imposing salon-size enlargements... huge screen pictures projected in full, rich color... fast lenses which permit snapshot exposures under a wide range of lighting conditions... workable depth of field even at high apertures... extremely wide range of choice in black-and-white film materials... full-color films for daylight, photoflood, or photoflash... operating refinements and conveniences rarely found on large cameras...

That's miniature-camera photography—a field of endless fascination for amateur and "pro."

For flood shots (black-and-white or color) a Kodak Vari-Beam Standlight offers valuable aid.

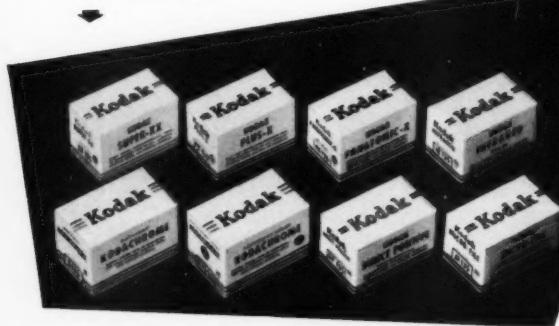


Kodak Combination Lens Attachments provide not only a wide choice of Kodak Wratten Filters—but also filters for Kodachrome Film, Kodak Portra Lenses for close-up work, Kodak Lens Hoods, and Kodak Pola-Screens—in a size range to fit every popular miniature-camera model.

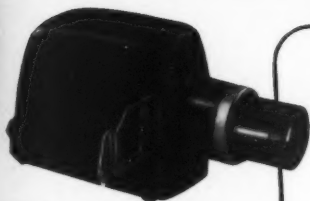


KODAK FILMS

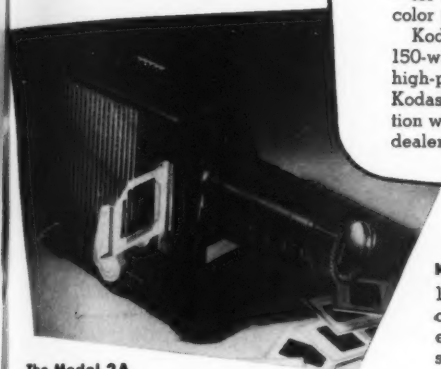
These Kodak 135 Films suggest the wide selection of materials for the miniature-camera owner: super-speed films for night shots, fine-grained films for huge enlargements, infrared for spectacular scenics, Kodachrome Film for color, night or day; special direct positive and copying films, too.



Kodak Films and Kodak Combination Lens Attachments make natural working teams.



Kodaslide Projector, Model 1A

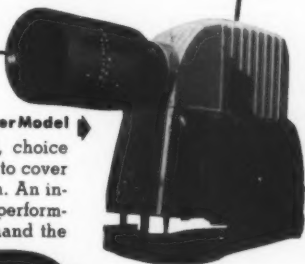


The Model 2A

FOR SCREEN PROJECTION

HAPPY combination for full-color photography is a Kodak miniature camera and Kodachrome Film. With the simplicity of black-and-white, this film-and-camera team yields richly detailed transparencies in full color—for screen projection to imposing size, or for full-color prints.

Kodak makes many projection aids—the capable 150-watt Kodaslide Projector 1A, the popular 2A, the high-powered Kodaslide Projector, Master Model; the Kodaslide Changer for smooth semiautomatic projection with the 1A and 2A; and others. Ask your Kodak dealer to show them to you.



Kodaslide Projector, Master Model

1000-watt, power-cooled, choice of five Lumenized lenses to cover every projection situation. An instrument of masterful performance, for those who demand the best.

FOR FINE PRINTS

Versatile Kodak contact printers, brilliantly engineered enlargers with highly corrected Kodak enlarging lenses, and Kodak sensitized papers in a great variety of types, surfaces, sizes, and speeds—these spell superior prints from your miniature negatives. Here are the enlarger and contact printer you may well choose.



Printer also accepts large negatives—up to $3\frac{1}{4} \times 5\frac{1}{2}$ and 4×5 inches.

The sturdy, able Kodak All-Metal Printer, Model 3, has special guides for 35mm. film and 35mm. paper, for making strip prints and black-and-white positives for projection.

For compactness, the Kodak Portable Miniature Enlarger is a perfect design. It accepts 35mm. and Kodak Bantam negatives; has a triple condenser illuminating system, a choice of Kodak Ektar and Ektanon lenses, and projects to nine diameters on the baseboard (more when turned to floor or wall).

See your Kodak dealer

KODAK products are sold through Kodak dealers, any of whom will be glad to complete descriptions of Kodak products which are mentioned in these pages. Usually, too, they will give you opportunity for firsthand inspection of the advertised items.

In matters of general photographic information your Kodak dealer will be found to be well and soundly informed.

Kodak

Now—in one small kit...



all the chemicals
you need for an evening's
developing or printing



Kodak Tri-Chem Pack saves time, saves trouble, saves chemicals. It's especially convenient if you develop and print in your kitchen or bathroom. You make what you use; use what you make; no surplus to bottle and store. And you can depend on uniform results—with fresh, new chemicals every time.

Each Kodak Tri-Chem Pack makes 8 ounces of developer, 8 ounces of stop bath, 8 ounces of fixer . . . enough to process two rolls of 620 film, or fifty $2\frac{1}{4} \times 3\frac{1}{2}$ prints, or equivalents.

Mixing's quick and easy. Tear off corners of packets and pour contents into prescribed amounts of water. (Detailed instructions with each kit.)

**EASTMAN KODAK COMPANY
ROCHESTER 4, N. Y.**

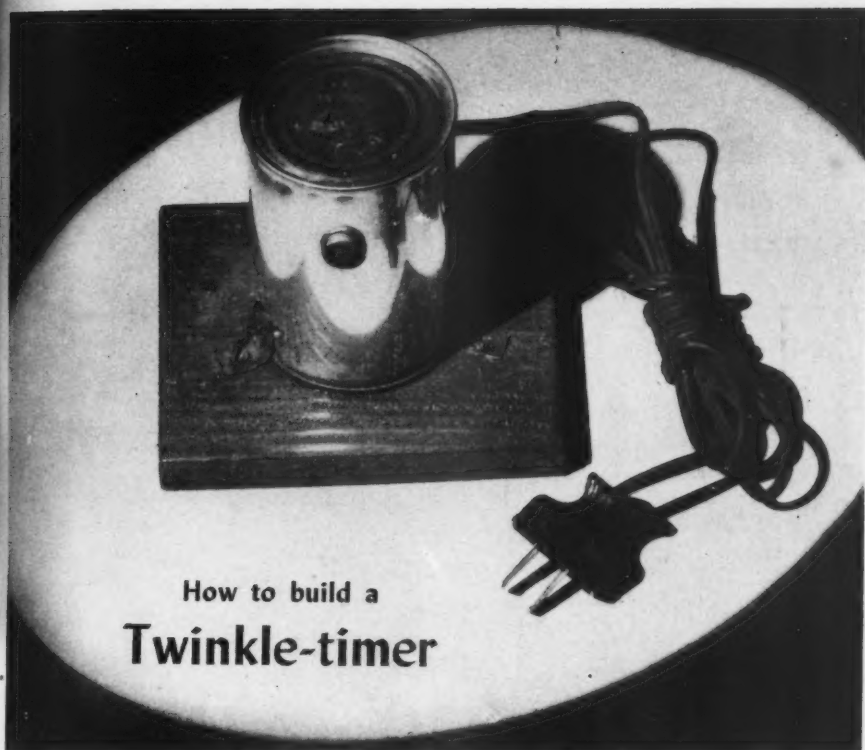
"KODAK" IS A TRADE-MARK

Kodak



Each Kodak Tri-Chem Pack contains: Kodak Universal M-Q Developer; Kodak Universal Stop Bath with Indicator; Kodak Universal Fixer—all in handy foil packets. Price, 20 cents.

Price subject to change without notice



How to build a Twinkle-timer

By Phillips St Claire

IF A CYCLOPS straight out of Homer would let you wire him with electricity so that the single eye in the center of his forehead would flash on and off at regular intervals, he might make a novel darkroom timer. For a couple of millennia, however, there has been such a shortage of Cyclops that you may find it handier to build a soupcan-and-gimmick timer in an hour or so at a cost of about \$1.00. I call mine a "twinkle-timer" because it has a ruby "Cyclops" eye in the center that blinks on and off every second, and by counting the flashes I can expose a sheet of printing paper for any length of time desired.

The heart of the timer is a simple

electronic device called a "flasher." This is the same sort of unit that is used to make Christmas tree lights flash on and off. If you don't already have a flasher, you can buy one at any hardware or electrical equipment store for 50c or less. Although flashers are fairly constant, current changes and the wattage of the bulb used will determine the timing of the flashes. I have found that a 7½ watt red darkroom bulb averages 60 flashes per minute and the variables are never more than a few seconds one way or the other. For practical purposes, the timing is perfect.

Other parts of the timer consist of a small soup can for a housing, a socket,

(Continued on page 124)



1001 LIGHTS IN CHICAGO

Shoot pictures at midnight

BY E. M. FEATHERS

WITH THE SETTING of the sun, the world changes its face. Skyscrapers become serrated fangs against the skyline, aloof from the slums that have melted into their feet. A statue, uninspiring by day, appears boldly dramatic under flood-

lights. But while the main arteries become maelstroms of light and carnivals of sound, two blocks away a yellow streetlight, shining through a fire escape, places bars of shadow across the windows of a tenement house with an ironic symbolism that



BILL KNEFEL

for the most part goes unnoticed.

In every hamlet, every moonlit countryside, similar transformations take place each night. Seldom, however, are the interpretative effects of a scene the same two nights in a row. They alter with each change in the weather, each change of the season, each hour of the night. For the photographer accustomed to putting his camera away at sundown, night photography offers a change of pace, and the backdrop for mysterious and expressive pictures almost impossible to duplicate.

One of the most pleasant things about making night photographs is the fact that any camera, including a box camera, can be used as long as it has a "time" or "bulb" setting. I personally prefer a camera that provides ground-glass focusing, because I like to be able to view the composition exactly as it will be on the negative. This type of camera, too, uses sheet film and the negatives can be developed and printed individually whenever desired instead of waiting to finish out a roll.

Don't put your camera to bed with the chickens

Night pictures can be made wherever there is light. Naturally the exposures for night shots are long compared with those used for daylight photography. In general, it is better to use a film with a finer grain than the super-speed types of film afford because speed is not particularly important for most night pictures. Orthochromatic

IN THE STILL of night a street becomes the realm of King Winter. Note how the camera lens was protected from the rays of the street-light so as to control the brightness range. Exposure was 4 minutes at F:5.6 on Plus X film.

—Photo by E. M. Feathers



emulsions can be used equally well since color rarely plays a part in night pictures.

If you use a twin-lens reflex camera, or a miniature camera that does not feature an automatic film-wind, it is wise to carry a pocket flash with you on your night shooting jaunts. Otherwise you'll have trouble reading the exposure numbers through the red window when you advance the film.

Unless you plan to shoot only brightly lighted subjects with a very fast lens, some sort of a steady camera support is a must. A ledge or wall will do very well if you can depend upon finding one handy wherever you shoot; otherwise, a tripod is an essential accessory.

For street shots in a theater district or shopping area, exposures should be made as short as possible in order to prevent the blurring of figures and cars. I have made successful exposures as short as 1/5 second at F:11 in many cases, and in brightly lighted areas it is sometimes possible to shoot at 1/25 second with a lens opening of F:3.5. On a miniature camera this opening will provide sufficient depth for overall sharpness.

Usually a small stop of from F:11 to F:22 is used to give depth of field and overall sharpness when speed is not necessary. A small opening of this sort often means that an exposure must run as long as thirty minutes. Every exposure must necessarily be made by trial and error, but there is plenty of margin for error.

As a rule, exposure is varied on individual negatives by keeping the F: stop constant and changing the time. If the first exposure is five minutes, for instance, it won't do much good to shoot a second exposure at four minutes and a third at six minutes. The density of all three negatives will be about the same. Instead, the

(Continued on page 136)

SAILORS' HAVEN, the "Top o' the Mark" (Mark Hopkins Hotel) in San Francisco. 10,000 romances were spawned on this observation deck high above the city. Does your city have a romantic or nostalgic spot that could be given a dramatic twist of interpretation by photographing it at night? *Black Star by Crane.*

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PHOTOGRAMS

pictures without a camera

PHOTOGRAMS are the venerable granddaddies of our modern photographs. Fox Talbot was making them back in 1835, and they still rate high with experimental photographers as a form of creative art. No camera or film are needed for making a photogram. One or more small objects are simply placed on a sheet of photographic paper under a safelight, and are then exposed for a second or so to white light. When the paper has been developed in the usual manner, the shadow-images of the objects that were placed on the paper form the picture.

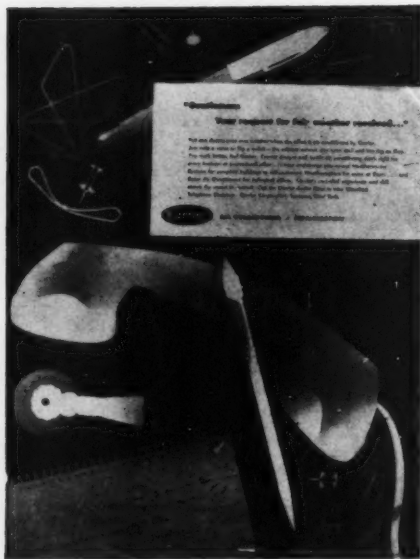
A photogram could be made on film and then printed onto paper, but exposing directly on the paper itself is easier because it can be handled under a safelight, and has emulsion speed slow enough

to permit measurable exposures to ordinary white light.

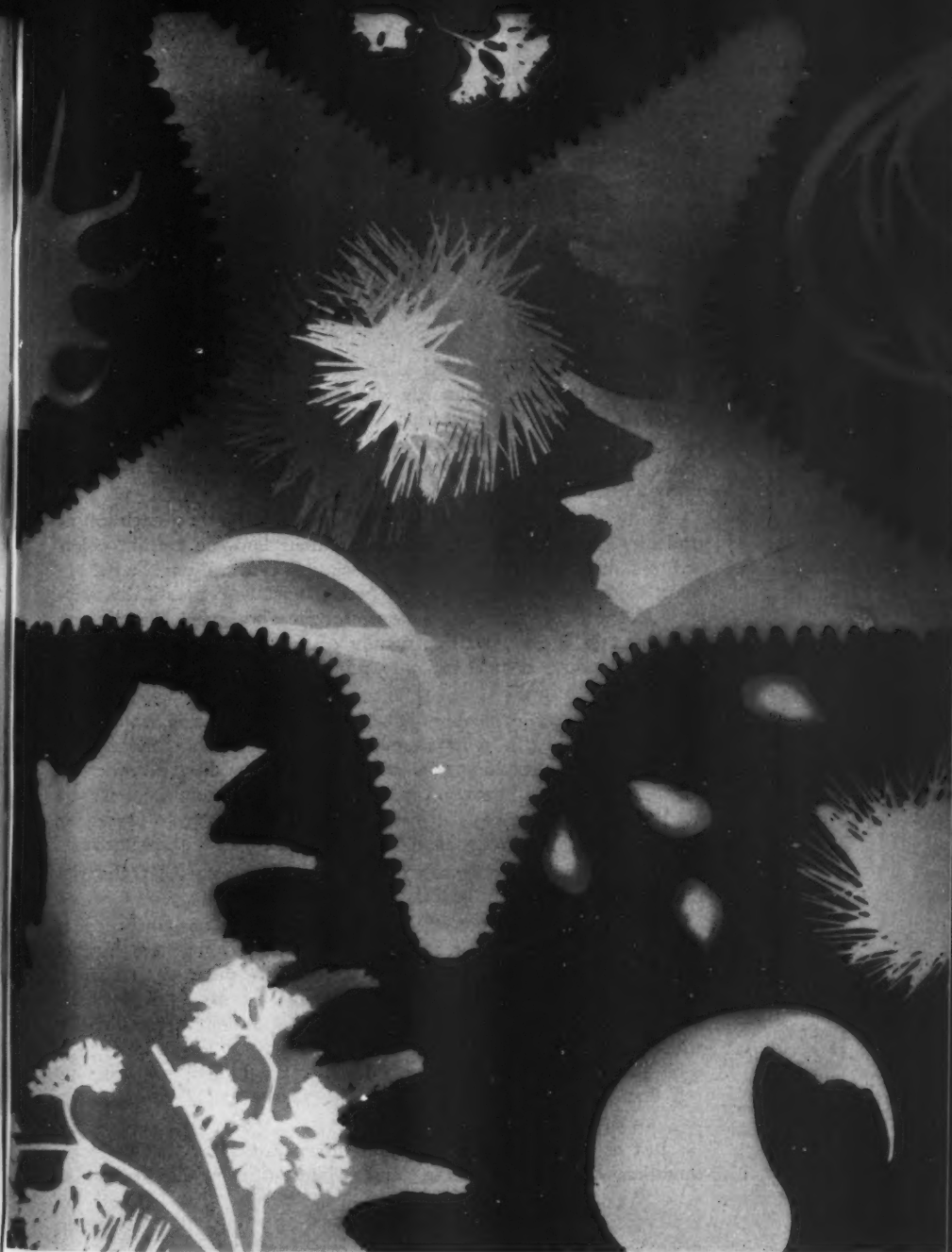
A photogram is primarily an arrangement of pattern and shapes; it suggests rather than explains—so it usually doesn't matter whether or not the print is "negative" or "positive." Because a photogram depends on pattern rather than fine details, it is usually desirable that the tone contrasts be more crisp and definite than in an ordinary photograph. This calls for a high contrast grade of paper such as No. 3, 4, or 5; in Velox or Kodabromide, for example. It can be matte or glossy.

The light source can be your enlarger, a flashlight, pen-light, room-light, matches, or perhaps even a spotlight if used at a long distance away from the paper. For instance, one popular way of making photograms is by placing objects such as flower petals, grass, pieces of paper, or other translucent whatnots on the negative carrier of the enlarger and projecting their shadow image onto the paper. Exposure should be figured like any enlargement—using test strips. Interesting effects can be obtained using this method by making several exposures on the same sheet of paper while changing the position of the paper on the enlarger baseboard and perhaps even changing the position of, or substituting different objects in the negative carrier, to be printed on the same sheet.

(Continued on page 143)



A PHOTOGRAMATIC interpretation of a business office by Mednick has undoubtedly attracted more attention to the Carrier Corporation's (Syracuse) air conditioning messages in full page magazine ads than would have been possible with an actual photograph.



BEACH SCENE by Andre De Dienes is an impressionistic photogram of patterns and shapes; its purpose is to suggest rather than explain. Notice how the tonal variations of different images range from gray to white according to the translucency and depth of the objects used for subject matter.

HOW TO SEE COLOR

WHY DOES A CRISP garden salad seem more appetizing on a hot summer day than on a blizzardy winter evening? Why wouldn't you want to be caught dead wearing a flaming orange necktie garnished with pink polka dots? And how does the girl in the white tennis shorts who seems guileless by day become transformed into a woman of mystery under moonlight and black velvet?

Mostly it is a matter of color. During a lifetime each of us gradually builds up unconscious associations between certain colors and certain experiences. These associations govern our "taste" in colors to the extent that we react psychologically to practically every hue. Because of your associations, for instance, you like maroon and think of it as a warm, friendly color—or you dislike maroon, perhaps, because it unconsciously reminds you of a pool of dried blood you once saw.

But while certain colors have different association values for different persons, the *general* reaction of a group of persons to a certain color is something you can pretty well predict. Knowing in advance the general reaction to a color or color combination, you hold the key to pleasing the eye if that is your goal, or to producing a specific emotional reaction if the picture is to be interpretative.

Most people unconsciously read into colors somewhat the significance that appears in the chart on page 73.

While the chart shows the general significance of specific colors and color combinations it should be remembered that the psychological effect of any specific color will vary a great deal when it is associated with other colors. For this reason, a single color should not be thought of as an abstract, but rather in combination with other colors for contrast. A crimson flower, for instance, will spoil flesh tones or pink drapery because the human eye picks up red first. Some of the "redness" of the flower would be certain to seep into, and degrade, the pink tones.

Just as red, yellow, orange, and brown are colors that convey a sensation of warmth, greys, and whites convey the feeling of

Color is a key to our human emotions.



THE BLUES, greens and whites of mountain scenes give them a cold, distant look; when the warm yellows and reds of autumn foliage furnish contrast, the picture comes to life.

Photo by Glenn Dixon.



COLOR ACTION is hard to shoot because of the slow speed of color film. Boats make a good subject because they are large and the action is comparatively slow. In this picture, the action-angle is good because the boat is moving away instead of across the camera field.

Photo by Cy LaTour.

neutrality. In analysing your own color work on the basis of color associations, however, you may find that a white drape or background appears as anything but neutral. This is because a dead white object is tricky; it reflects other colors as readily as a back-yard gossip spills confidences. The remedy is to use light gray in place of white wherever possible—and let the gray appear white in contrast with the other colors in the scene.

As soon as two colors are used together, one of three things happen. The colors harmonize, contrast, or clash. These effects are easily explained by elementary color science—but beyond that pure aesthetics take over.

The human eye and the camera lens often see the same color differently against various backgrounds. A green object, in other words, will appear to change slightly in hue and form if it is placed against several different colors of backgrounds. Photographically, this means that while

a blue-green vase and a complimentary red background might be used so that each color would heighten the brilliance of the other, they would be apt to clash so violently where the colors meet that the greenish vase would actually produce a “vibrating” sensation.

Similarly, the human eye tends to generate complimentary colors to those it actually sees, and these complementaries become mixed in with the real colors. You have seen this happen when a wheel painted with equal portions of complimentary colors was spun. The spinning colors turn to gray; theoretically the mixing of complementaries can be extended to produce white. If, then, some of your color slides appear slightly “washed out,” despite the richness of basic color in them, it may well be that something about the choice of color combinations in the picture is causing your eyes to dilute them with complimentary colors that aren’t there at all.

SIGNIFICANCE OF COLOR

Red—warmth, action, danger, excitement.

Yellow—vivaciousness, gayety, sunlight, youth.

Blue—cold, dignified, distant, shadowy.

White—purity, sacred, peace, cleanliness.

Black—mystery, death, fear, hidden.

Gray—gloom, dreariness, silence, poverty, humility.

Orange—warmth, excitement, liveliness, light.

Green—freshness, vigor, serenity or rest.

Purple—regal, richness, pomp

Violet—feminine, solemnity, reserve, coolness.

Reds And Blacks—disaster, terror, horror.

Yellow-Green—autumn, sulphurous, disagreeable.

Green-White—calmness, coolness, cleanliness.

Blue-White—frosty, wintry, distant, aloof.

EMOTIONAL REACTIONS OF COLOR

Blue Green — Cool colors which produce a sensation of serenity, distance, restfulness, coolness.

Red Yellow Orange — Warm colors which produce sensations of activity, light, excitement, suspense.

Grey White Tan Black — Neutral Colors which set the stage for predominating hues.



Dark Horse

In the pungent darkness of a thousand commercial dark rooms many talented youngsters dream of recognition. Tosh Matsumoto is one of them.

BY GEORGE BERKOWITZ

TOSH MATSUMOTO is one of several thousand bright youngsters employed as darkroom assistant in well advertised commercial studios, who hope someday to improve on their masters. Tosh works for John Rawlings, New York's topranking fashion photographer of 154 East 55th Street, who some twenty years ago was a darkroom assistant himself.

Tosh Matsumoto doesn't know where or when his "break" will come; but meanwhile he thinks, breathes, and lives the heady wine of creative picture making on his spare time while doing a 37½-hour weekly stint for the meticulous, critical, demanding Mr. Rawlings.

From this he has learned the discipline of neatness and flawless darkroom technique. As is to be expected, he has become immune to fashion photography as a future business of his own, thinking instead that he will some day take the kind of interpretative pictures that will reveal men, each to the other, in terms of affection, gentleness, and a wholesome respect for human dignity.

In Tosh Matsumoto's creative mind,

there are threads of loneliness, sensitivity, and a feeling for beauty, buffeted by an imp of humor.

He is the kind of man you would instinctively cross the room to meet. He is an amalgam of the East and West. The usual bland features of the Japanese disappear in his disarming smile. He is reticent and soft-spoken — almost shy — but his artistic urge radiates in occasional erratic outbursts which are quickly subdued.

Books of Marcel Proust, Sherwood Anderson, Victor Hugo, Plato, Ambrose Bierce, E. M. Forster, and John Galsworthy are in his library, but he also reads the newspaper comics. He drinks beer and likes ham and cheese sandwiches.

Physically, Matsumoto is medium height and stocky. He has the build of a college wrestler. His most distinguishing characteristics, aside from his smile and glasses, are dignity, grace, and a developing confidence.

Matsumoto dismisses his own photographic accomplishments with extreme modesty. Despite the fact that his work

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Task Assignment





JAPANESE PRINT



WHEN A BENEVOLENT government, at war with Japan, was unable to filter the one traitorous Jap from the hundreds of thousands (who knew?) who were loyal, the great mass of Japanese in America were put into Relocation Camps . . . including Tosh Matsumoto. This photograph gives you the feeling of puzzlement and bewilderment the photographer himself as well as this child may have felt.

go to school during the day and paid him \$10 a month in addition to room and board.

Apparently, however, the fish diet in Japan had undermined his health, for he became ill, first with pleurisy, then with tuberculosis. He spent the next three years in a hospital. In May, 1941, he was released as cured and went home.

Then his world overturned — Pearl Harbor, the declaration of war against

Japan, and the evacuation of the Japanese from the West Coast. Matsumoto was sent first to Merced Assembly Center, where he and his camera were parted for a short time. After three months, he was transferred to the Amache Relocation Center in Granada, Colo.

Faced with restricted movement for an indefinite period, Matsumoto knew he had to learn some kind of trade. At Merced, he enrolled in a government sponsored course of commercial and showcard



lettering and in a correspondence school course of drafting.

When he was shifted to Ameche, he worked at sign painting for the center for two months, then served as mailman for a year. He was next assigned to the center's mimeographed newspaper, where he cut the headlines. For the first half-year, Matsumoto earned \$12 a month — the United States Government paid the Japanese who worked — then raised to the top-level salary of \$19 a month.

At Ameche, Matsumoto took a course of painting before he was permitted to resume use of his camera. When this permission was granted, he had no equipment nor money to buy it, so he decided to build his own. He sent for all the free booklets from manufacturers that he could get, especially those on how to make an enlarger. Ingeniously, he devised a method of using his camera as part of the enlarger of using his camera as part of the enlarger. He set up his darkroom in a box just large enough to accommodate his body. The trays and other equipment he purchased.

Matsumoto is still amused when he thinks of his makeshift arrangement. "If you think that was bad," he says, "you should have seen the darkroom of one of my friends. He dug a hole under one of the buildings in the center and used that as a darkroom."

The various booklets sent to him by manufacturers, plus a copy of the Eastman book, *"How to Make Good Pictures,"* came in handy for tips on how to improve his pictures. Difficult as film was to get on the outside, it was much more scarce inside the center. Matsumoto got all of his by mail, ordering from Montgomery Ward, the Eastman store in Chicago, and other sources. Because 35 mm film was much easier to obtain, he used a friend's Argus for much of his photography.

When the government began permitting relocated Japanese to leave the center, Matsumoto made plans to go to Chicago. Since his release was on a trial basis, he received no federal aid. Having no funds, he earned the money by taking portraits of Japanese in the center, charging 15



TWO LITTLE SNAPSHOTS that say kids are natural and a lot of fun; while at the same time gently kidding the popular notion of telling the subject to "look pleasant, please."





THE LONG SHADOWS of a late afternoon sun become useful diagonal lines to the photographer who waits them out.

cents for a 4 x 5 picture and 50 cents for an 8 x 10 print.

When he arrived in Chicago, Matsumoto stayed at a hostel for a week, but, disliking the city, decided to go to Minneapolis. After three or four days there, he became homesick and returned to Ameche.

All this uncertainty and wandering

around, of course, was due to the emotional strain of a sincere young American who believed in Democracy, and yet was looked upon with considerable suspicion by a hundred and fifty million people.

Soon he decided to strike out again. This time, however, he was placed in the

(Continued on page 132)

**How to make album prints
from your color shots.**

Black and Whites from Kodies

BY JOE MUNROE

THE OTHER DAY I was showing a friend a fistful of vacation shots when a picture of the Chicago skyline from Lake Michigan caught his eye.

"Why I shot almost exactly the same picture in color last summer," he exclaimed. "Just a minute until I get the projector out. I want to see how near alike our pictures are."

There's nothing like a 35mm slide session for special occasions, but for in-between-times it can be an awful nuisance to have to trot out a projector every time you want to look at a picture. That is the reason many color slide and transparency shooters are making black-and-white prints from their color work. The prints themselves are generally not quite as good as an original black-and-white

might have been, but they are fine for the family album, the "master" slide reference book, or for mailing to friends and relatives.

There are two not-too-difficult methods by which such prints can be made with ordinary equipment. With the first method the problem is roughly the same as that of photographing a person or landscape. First cut a hole the size of the transparency in one end of a box, then place a light inside the box. Tape the transparency over the hole, turn on the light—and there's your person or landscape in miniature. Next, carefully align and focus your camera to take a close-up of the illuminated transparency on panchromatic film, just as you would the original subject. If you like, you may even use a yellow filter

AN AMATEUR SETUP for making black-and-white prints from a color transparency. Here the "copy stand" is part of a retouching easel. The transparency has been taped to the opal glass with a cardboard mask around it to keep out stray light. A desk lamp furnishes the light and timing is by the sweep second hand on a wrist watch. Note that a Proxar lens is used on the reflex camera for this sort of closeup work.



to darken the blue sky. From the resulting negative, any number or size of black and white prints can be made in the usual way.

The second method of making black and white prints from color slides calls for the use of an enlarger. First, place the color slide in the negative carrier; then set the paper easel opening for, let's say, a 4 x 5 film size. Focus and compose within that opening, then turn out all the lights, insert a sheet of pan film in the easel, and make a series of test exposures. The chances are that the film you use will be many times faster than enlarging paper, so you'll want to use a small stop opening on the enlarger lens, and give a very short exposure—about 3 seconds at F:22 will do as a starting point for blowing up a 35mm slide to 4 x 5 on medium-speed copying film such as Isopan. Develop normally in a soft-working developer such as D-76, and you have a black-and-white, enlarged negative of your slide.

While the process of making black and white prints from color transparencies is basically simple, there are some pitfalls to avoid along the way, if the results are to be more than just passable. Like any copy prints, these will tend to be more contrasty than the original. The accumulative errors

that result from passing through several different mechanical and chemical processes will result in some loss of detail, and a natural degrading of the tonal scale. Color transparencies are naturally of high brilliance because they are meant to be viewed with *transmitted* light. Tones in both highlights and shadows are lost when the transparency is changed to a print to be viewed by *reflected* light. On the other side of the ledger, some additional control is gained because the black-and-white prints can be "dodged" during the final printing from the copy negative.

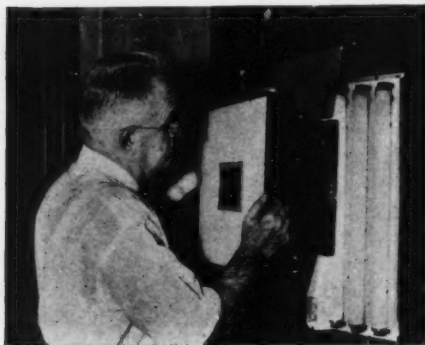
Let's have a look at the procedure used by a commercial studio. The Grossman-Knowling Studios in Detroit are called upon for a number of scientific color pictures for the Parke Davis Co., who insist upon a black-and-white file print from each transparency.

To make these file prints, a huge 11x14 studio copy camera is rigged with a reducing-back to 4 x 5" in size. A light-box with a frame for holding the transparencies is fastened to the copy easel; inside the light-box are three white fluorescent tubes. Fluorescent lighting is used because it is cooler, and has a "softer," more evenly distributed intensity. Moreover, it is close

(Continued on page 129)

PROFESSIONAL setup for making black-and-white prints by re-photographing color transparencies. At the left, J. L. Grossman of the Grossman-Knowling Studios in Detroit is adjusting the lightbox, on which a transparency has been taped to the opal glass, to the fluorescent lights which furnish illumination. At

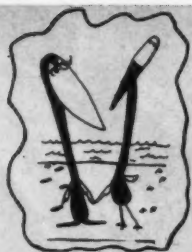
the right he is making the exposure with a Packard shutter and interval timer. This 4 x 5 color transparency will be copied on 8 x 10 black-and-white film. The gadget that looks like a telescope is a magnifying glass used for checking the focus on the camera ground glass. *Joe Munroe*





BLACK-AND-WHITE print made from a 4 x 5 Kodachrome.

Winston Pope-Shostal



Isle Of Rhythm

Earl Leaf returns after eight months in the Carribbean photographing dances in honkytonks and waterfront cafes.

THE PHOTOGRAPHIC VAGABOND knocking around in the odd corners of the world, as I do, learns to keep his equipment and supplies as simple as possible. When I go roving around the streets of a city, climbing mountain tops or wading through swamps, I tote one type of camera, one type of film, medium-yellow and orange-red filters, lens caps, and one exposure meter, nothing else. Then when

I suddenly come upon something that needs fast operations, a couple of alligators in a death fight, for instance. I'm ready and I don't get caught with the wrong type of film in my camera. When I reload, I don't have to search my carry-all bag for any special type or speed of film.

In town I carry two Rolleiflexes around my neck, one loaded with Eastman Super-

PLANTATION WORKERS and their children enjoy this rural rumba. The rumba remained in the interior for three centuries before it reached the Cuban cities.





NGALA'S HANDS dance out a theme of love.

XX or Ansco Superpan Press, the other loaded with Ansco Color roll film. When doing special color work, I have an assistant to help tote extra gear: in addition, there is an Anniversary Speed Graphic $3\frac{1}{4} \times 4\frac{1}{4}$, with Ektar lens, loaded with color films.

Only the pure in heart trust exposed

film to local darkrooms. One should carry along a developing tank and necessary chemicals or arrange to send everything to the home laboratory. All my film, color or B&W, is airmailed to New York within a few days after exposure. Exposed and unexposed film is stowed in adhesive-taped tins containing silica gel to absorb

moisture.

Today I returned from several months in the Caribbean photographing the dance. I went there simply as a photographer, armed with camera, flash bulbs, and a sense of adventure. My pictures were taken to provide fresh research data for the choreographer, stage designer, dancer and dance historian. To the hundreds of brown and olive-skinned friends who danced, sang, chanted and beat their tambours under a tropical moon, by the light of flares or in a honkytonk saloons while I photographed them—my thanks.

The Carribean natives weren't always willing to be photographed and I was badly mauled a few times. Often I would get caught in the midst of a maelstrom of dancing madmen and drum-crazed women who crowded and jostled me so much that working became impossible.

Starting out for a night of dance pictures in a jungle clearing, or a waterfront honkytonk cafe, I took along my two Rolles, plenty of the fastest pan film and a large canvas bag of GE 11 or Wabash Press 50 flash-bulbs over my shoulders. For close-ups I would have preferred smaller bulbs but one can eliminate danger of burning-up a subject by cutting down on apertures and, using fast speeds. I wanted one size bulb because I worked too furiously fast for a look-see at the kind of lamps being pulled out of the bag.

I always wear a glove in order to handle hot flashbulbs instantly and also avoid dangerous burns from lamps accidentally discharged while being inserted into the gun.

When I was flush with flushbulbs, had an assistant, adequate space and an orderly crowd, as in a night club, I liked to use flash extension, with a second lamp off to one side.

Most of the time I scurry and scamper around like a monkey, climb on chairs or

LA CONGA, lusty and rhythmic, is a gayer cousin to the pale imitation that enjoyed a brief fad in the American ballrooms.







into trees, squat on my haunches, weave in and out of frenzied dancers and am ready for anything. There was absolutely no time to "compose" a picture or do any re-takes. My policy is to shoot everything and select the best action later. After much experience one gets to work at such a high-tuned pitch that mental reactions become instantaneous. Truth to tell, my conscious mind didn't "see" much good stuff that my camera recorded. There are photographs of the Voodoo ceremonies, for instance, which I do not remember seeing at all.

These pictures were the toughest of all and it was just dumb luck that I got what I did. I was dependent upon one camera as the other was being repaired. The night was black, the natives were black, and practically invisible except for flashing teeth and eyeballs. No light was available to focus or compose the scene on my ground-glass. I had to aim my camera like a fire-hose and shoot. My flashlight had disappeared, the last of my matches were used up. I couldn't read the numer-

als to know my speeds or apertures. I had to change film by the touch system, in complete darkness, and do it fast as something was happening every moment.

THE WEST INDIAN African drum beat, always in 2/2 or 4/4 time, predominates in any classification of the dance, whether it be a sacred Voodoo ritual, a simple folk dance in the country.

The drum beat has a way of entering the body at the roots of the hair, fevering the brain, sending an electric shock from one shoulder to the other, shooting down the legs to the very tips of the toes where it is exploded back into the atmosphere.

The most significant change from the traditional dances of Mother Africa was the introduction of the erotic element. Pearl Primus, gifted American Negro dancer and interpreter of primitive dances, takes the view that the "sex dancer" is a product of frustrated civilized man. I believe, however, that the hard-living West Indian Negro and his voluptuous, free-



AT THE RISK of his very life, Earl Leaf photographs the forbidden Voodoo dance, deep in the black Haitian jungle. During the dance the worshippers become hypnotic, go wild. At the far left, a dancer hangs on wooden beams and places her naked feet on red hot iron.

Center, the dancer declares she is raped by the wraith of God. Right, a "possessed" dancer steps boldly into the fire. The flames lick around her body but she is not burned. Earl Leaf saw it, photographed it, cannot explain it.

loving, rum-drinking, hip-swinging, bosom-bouncing, shoulder-shaking, stomach-rolling creole woman, with rhythm in her thighs, are almost wholly responsible.

The native cafe, dancehall or honky-tonk, the most likely spot for the town negro to find a willing Jezebel, offers everything else, too. Rum is his cup of forgetfulness, food his strength and energy, fighting with fists or knives his externalization of repressed rebellion against the economic and social bars which imprison him, a tawny trollop his chief goal, dance his method of achieving sublimity.

Strangely enough, most of the legislation and police regulation directed against the West Indian art forms applies to the religious and folk dances, or music, and not to the wanton dances of the cabaret or bordello.

Attempts to photograph the sacred and folk dances of the Caribbean were repeatedly hampered by the people's fear of police and church. Often I felt inspired with a missionary zeal to campaign

(Continued to page 139)

BELOW, drummer sends dancers into frenzy with slow, steady 4/4 beat.



WHICH LIGHTS SHOULD I BUY?

ALTHOUGH even the most casual snapshotter may come up with a fine outdoor photograph once in a while, a good picture or strip of movie film made *accidentally* by artificial light is as rare as a gold nugget in a cinder pile. Indoors it is the photographer's skill in complimenting a subject with controlled light that creates an attractive picture.

The important thing about using artificial light is to (1) know *which* lights to use under given conditions, and (2) know how to get the most out of each particular type of light.

As a guide in helping you choose lighting equipment, we will look into the various advantages and disadvantages offered by each of the two popular types of artificial lights. In Part I of this survey we will deal only with floodlights. Next month, in Part II, we will discuss spotlighting equipment.

The term "floodlight" accurately describes the character of illumination designed to literally "flood" a subject with light.

Floods are responsible for the best in soft portrait lightings because one of the most important aspects of this broad, diffused light source is its ability to preserve shadow details. It is also unexcelled in color photography where excessive lighting contrasts are not needed, and in copy work and home-movie making.

Without a reflector, a floodlamp loses much of its efficiency because its illumination is dissipated in every direction. It may illuminate as much as six times the

area included in the camera's field of view. To conserve this "wasted" light, efficient reflectors are needed — but to be really efficient, each shape and size of lamp requires a differently designed reflector.

Since floodlights are available in a baffling array of sizes, prices, and designs, it is something of a problem for a photographer to make a choice. The only way in which he can make an intelligent decision is by analyzing the principle uses to which he will put a light.

If a floodlight is to be used for only an occasional home snapshot, a No. 2 photo-flood in an inexpensive clamp-on reflector may suffice. If, on the other hand, the light is to meet the requirements of commercial photography in black-and-white and color, a more exacting type and quality of light is necessary. In this case, several ellipso-spherical reflectors may be needed in order to produce a tremendous blaze of light without the hotspots and streaks that sometimes occur with very inexpensive equipment.

Probably the most popular single floodlight sold is the familiar clamp-on reflector holding either a No. 1 or a No. 2 floodlamp. The rubber-padded, spring handle permits these lamps to be used on floor lamps, on doors, etc., eliminating the necessity for adjustable-height lamp stands. Individual lamp stands are handy, however, for studio work and commercial "location" photography where pictures are taken in stores, factories, etc., or where no assistants are available to hold up the lights while the picture is being made.

PART I — FLOODLIGHTS. MINICAM LIGHTING EQUIPMENT SURVEY



HOW MANY LIGHTS were used in making this picture—and what kind of lights were they? As you grow accustomed to judging the lighting effects in a picture, you can answer these questions correctly nine times out of ten. One floodlight in a reflector was used to illuminate the girl's face. The single highlight in each eye, and the softness of the shadows tell this much of the story. The floodlight was to the

left of the camera and a little above eye-level; the nose shadow reveals this fact. The background is neutral gray in tone and is evenly illuminated—thus hinting that it was lighted by two photofloods, one on each side. The bright spot in the girl's hair could come only from a spot-type of illumination. Add them up and we have four lights; three flood types and one spot-type. *Photo by George Boardman.*



WHEN only one flood or spotlight is used as the main light source for illuminating a subject, only one brilliant catchlight can appear in each eye. This single catchlight in each eye appears more natural than multiple catchlights because it is what we are used to seeing in another person's eyes under sunlight.

Diffusers are available as snap-on accessories for many of the better quality flood lamps. Usually the diffusers are steel-ring assemblies in which spun glass or a diffusing cloth is clamped tightly around the entire periphery. An extremely diffused light is useful as a fill-in supplementary light in portraiture or any place where relatively shadowless illumination is required.

The chief advantages of floodlights are three-fold: (1.) They are comparatively inexpensive (2.) they are easy to control when used in reflectors equipped with swivel or ball-joint sockets (3.) they throw a great deal of illumination over a wide area. A baby on the floor, for instance, could crawl out of a spotlighted area very quickly. With two or three floodlights supplying the light, the room would be illuminated sufficiently to allow good exposures to be made over a much greater area.

The chief disadvantages of floodlights are their short life (an average of 3 to 6 burning hours for the most popular sizes), and the heat they generate (sufficient to scorch cardboard reflectors or set fire to cloth that is allowed to remain in very close proximity to the bulb). A minor disadvantage is the awkwardness of the portable stands that are often used to support floodlights. This, however, is a dis-

advantage common to almost any type of photographic light.

Fluorescent Lights

For the most part, fluorescent lights, which are a type of flood, are used only in professional studios for taking black-and-white portraits. A single fluorescent tube does not provide sufficient illumination to be particularly useful for photographic purposes. Thus several tubes have to be combined in a single lighting unit before enough light can be generated for photography—and several tubes plus the necessary transformer mean that the lighting unit will be comparatively expensive for an amateur to buy.

However, the actinic value of the light is usually somewhat above visual estimates, and the units are inexpensive to operate when compared with ordinary incandescent lights.

Fluorescent lights have two additional advantages: They provide cool and glareless illumination. Every person who has had his portrait taken under the often intense heat and light of ordinary floodlights can readily appreciate this feature.

In the hands of practiced photographers, the fluorescent units can be controlled to give excellent lighting effects, particularly when supplemented by one or two spotlights placed in back of the subject for accent or "pick-up" lights. The large illuminating area of the fluorescent unit is such that the lighting is bound to be "soft." In taking portraits of women, this may be a decided advantage, because soft lighting helps to erase facial lines and wrinkle.

From the characteristics of fluorescent illuminants already outlined, it can be seen that they are not very well suited for color photography. The comparatively slow color films need a fairly high illumination level. In addition, fluorescent tubes have a color temperature somewhat higher than can be used for either Ansco Color Film or Kodachrome unless a color compensating filter is employed over the camera lens. Moreover, fluorescent tubes have intensity "peaks" in certain regions of the spectrum

which make them unsuited for scientific or commercial color photography.

One helpful adaptation of fluorescent lights is found in a fixed ceiling light. This overhead unit is designed to provide shadow illumination without interfering appreciably with the modeling produced by the main or "key" light source. Since the effectiveness of flood lighting depends upon the subject to be lighted, and the equipment used to accomplish this, there are certain points that should be kept in mind when buying new equipment.

1. *In buying a reflector, what size and/or shape of reflector is best suited to your lighting needs?* There are three major factors affecting light output and illumination control, namely: (a) reflector size, (b) reflector shape, and (c) interior finish. The shape of any reflector will control the direction of light beams, the size will control the area of illumination, and the interior finish will qualify the character or color of light.

Many photographers feel that the ideal reflector for portrait work is one whose diameter is approximately equal to the size of the subject's head.

2. *What are the merits of clamp-on reflectors?* Clamp-on reflectors can be attached to chairs, doors or room fixtures, and are less expensive than reflectors that must be purchased with a supporting stand. The clamps are covered with rubber to provide a gripping surface without marring furniture. These reflectors can fairly well duplicate the work of stand-supported reflectors, but for obvious reasons are less self-sufficient and are recommended only from the standpoint of economy.

3. *What should be considered in buying a reflector stand?* The major points to consider in buying a stand are: (a) strong tubular construction with no open seams that cause tubing to collapse by repeated pressure of thumb screws; (b) several telescoping sections so as to insure maximum and minimum folding space; (c) sections that do not come out when fully extended, so as to prevent lamps from falling; (d) large thumb screws for easier



WHEN more than one flood or spotlight is used to illuminate a subject's face, multiple catchlights appear in each eye. Multiple catchlights are distracting because they appear unnatural and call attention to lighting technique. If multiple catchlights can't be avoided in the eyes, most photographers prefer to spot out all but one catchlight in each eye.

handling; (e) heavy steel stamping at point of thumb screw so as to avoid stripped threads which render the stand useless; (f) adequate leg spread to prevent tipping; (g) proper rust-proof plating.

4. *What are the most important physical considerations to be considered in buying a reflector?* The shape and inside finish of a reflector is in most respects a matter of personal preference. Reflectors are usually aluminum spinings. They should be of a substantial gauge so as to withstand reasonable handling. Dented reflectors throw shadows and have a negative effect on the finished picture. A polished exterior can be easily cleaned and of greater importance is a smoothly etched interior surface. When properly done, such etching of aluminum produces the right shade and may affect lighting output as much as 10 to 25%. Well engineered fittings avoid "droopy" reflectors and will permit fixing the reflector at any angle. A well-made reflector will invariably employ wing screws and wing nuts so that all tightening can be done with the finger instead of tools. Irrespective of the length of the wire, which should be Underwriters approved for safety, a necessary requisite is a good 15 ft. extension cord with a 3-way service block at one end and a 10 amp. switch in the cord.

FLOODLIGHTS ON THE MARKET

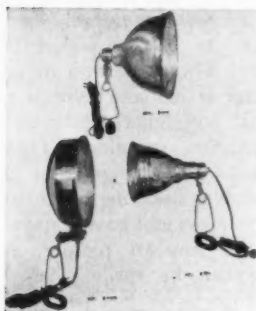
SOME of the larger lighting equipment manufacturers make more than thirty different models of equipment, hence it is impossible to illustrate and describe all of them here. Included in this survey are

typical models we believe to be of special interest to the majority of readers. In Part 2 of this survey, to appear next month, spotlight equipment will be discussed and illustrated in detail. •

ACME-LITE NO. 250 FOR NO. 2 BULB

Description: Conical reflector. Diam., 6½"; depth, 7¾". Porcelain socket, 8 ft. cord, rubbered clamp; exterior polished, interior etched.

Mfr.: Acme-Lite Mfg. Co., 401 N. Wood St., Chicago, Ill. Approx. price: \$3.00.



ACME-LITE NO. 200 FOR NO. 2 BULB

Description: Parabolic reflector. Diam., 10"; depth, 7¼"; 8 ft. cord, rubbered clamp, exterior satin brushed, interior etched (also available with 10 amp. switch). Approx. price: \$2.35.

ACME-LITE NO. 2-V.B.

Description: Clamp on, Pan-Shape (No. 2). Diam., 9½"; depth, 4". Porcelain socket, 8 ft. cord with switch, rubbered clamp, exterior polished, interior etched. Approx. price: \$3.85.

BEST NO. 75

Description: Clamp-on type lampholder for reflector



spot and flood lights. Push-through socket, 6 ft. rubber cord. Price (less bulb) \$1.30.

Mfr.: Best Devices Co., 10516 Western Ave., Cleveland 11, Ohio.

COMPCO MODELS



NO. 3C101 AND 3C102

Description: Center balanced, no sag feature. Heavy aluminum, satin finished inside, polished outside. 9 ft. cord, rubber covered spring clamp.

Mfr.: Compco Corp., 2251 W. St. Paul Ave., Chicago 47, Ill. Price: \$4.95 (3C101—11½" flood); \$3.95 (3C102—6" spot).

FLUO-BRITE MIDGET



Description: 4 ¾" diameter, 6" deep, spun aluminum ball swivel, spring clamp with rubber covered jaws, nicked push-thru socket, 10 ft. of approved rubber wire, and rubber cap. Mfr.: M. Black Mfg. Co. 300-304 N. Third St., Phila. Price: \$2.55.

**FLUO-BRITE NO. 2
CLAMP-ON UNIT**

Description: 11" diameter, 8" spun aluminum. Nickel-plated push switch socket,



10 ft. of approved wire and rubber cap. Mfr.: M. Black Mfg. Co. 300-304 North Third Street., Philadelphia, Pa. Price: \$3.70.

**FLUO-BRITE NO. 1
CLAMP-ON UNIT**

(Not illustrated.)

Description: 10" diameter, 6½" deep, spun aluminum, 10-ft. approved wire and rubber cap. Mfr.: M. Black Mfg. Co. (Address above). Price: \$2.85.

**FLUO-BRITE NO. 2
CLAMP-ON UNIT**

Description: 12" diameter, 9" deep, spun aluminum. Large size swivel and clamp. Nickel-plated socket, 10 feet of



approved rubber wire, feed-thru switch and rubber cap. Mfr.: M. Black Co. (See address above). Price: \$4.85.

**PHOTOFLOOD CLAMP-ON
REFLECTOR**

Description: Heavy gauge aluminum, 11½" in diam. Takes No. 1 or No. 2 Photoflood lamp. Satin finish reflecting surface eliminates "hot spots" by complete light diffusion. Rubber covered spring clamp permits mounting reflector on chair backs, etc. Price: (without bulb) \$4.95.

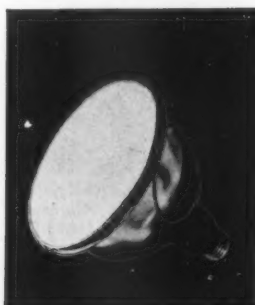


Available through Bell and Howell Co., 7100 McCormick Rd., Chicago, Ill.

**GLO-BRITE-FLOOD-
REFLECTOR DIFFUSERS**

Description: Sizes 6 to 18 inches. Approx. price: \$1.50 to \$3.90. (Not illustrated)

**GLO-BRITE ADAPTO
DIFFUSERS**



Description: Spun glass diffuser for reflector and spotlight type bulbs. Price: \$1.50.

Mfr.: Glo-Brite Products, Inc., 6415-17 N. Calif. Ave., Chicago 45, Ill.

VICTOR CLAMP-ON UNITS

Description: Standard series reflectors made of heavy gauge, spun alumi-



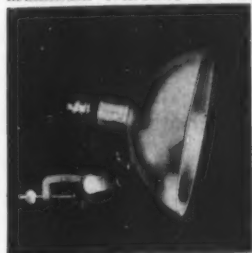
num. Frost etched interior and exterior. Nickel-plated spring clamp, rubber covered. Nickel-plated sockets with heat-proof switches. 10-foot cord with rubber plug. In two sizes: No. 10 Petite has dia. of 9", 4¾" depth (for No. 1 lamp), price: \$2.95; No. 60 Regular, dia. 10", 6¼" depth (for No. 1 lamp), price: \$3.20.

Deluxe Series feature polished exteriors, and other refinements in design. Available in a variety of shapes and sizes. Prices range from \$3.10 to \$6.50, tax exempt. Reflector illustrated is No. 70 Deluxe, 10" reflector, 6¼" deep, \$3.55.

Mfr.: James H. Smith & Sons, Lake and Colfax Sts., Griffith, Ind.

**KODAK VARI-BEAM
CLAMPLIGHT**

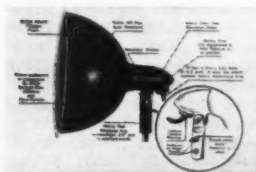
Description: Lightweight aluminum reflector, 12" in



dia. for "2 floodlamp. Interior finished in semi-matte surface to insure proper diffusion of reflected light. Ball and socket swivel mounting permits positioning at any angle, and a handle is provided for ease in use. C type clamp is felt padded. Price: \$9.75. Mfr.: Eastman Kodak Co., Rochester, N. Y.

10-INCH FLASH-FLOOD STUDIO REFLECTOR

Description: Designed to accommodate a No. 1 photo-flood lamp, or No. 22, No. 50, and No. 31 flash lamp. Any one of these sources will give an even pattern of light, free from hot spots or ring patterns over an angle of 40°. Spun from fine grade aluminum with special aluminated reflector surface and



glare proof grey wrinkled outside finish. Cast aluminum housing with nod-proof "Safe Clip" and pull-proof cord clamp. 15-foot 16-2 Buna Cord. Mfg. by Carr Associates, 8637 W. Washington Blvd., Culver City, Calif. Price: \$10.50 plus Excise Tax.

STAND UNITS

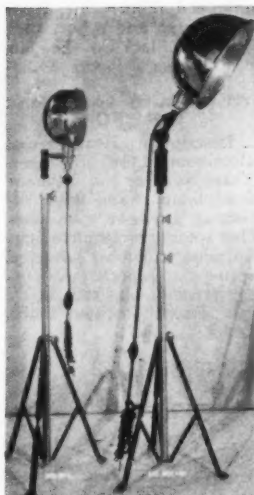
ACME-LITE NO. 81-L

Description: Pan shape, for T-20-500W medium, No. 1 or No. 2 bulbs. Diam., 8"; depth, 4½"; handle, mounted on two-section Litewater stand. Approx. price: \$12.

ACME-LITE NO. 901-W

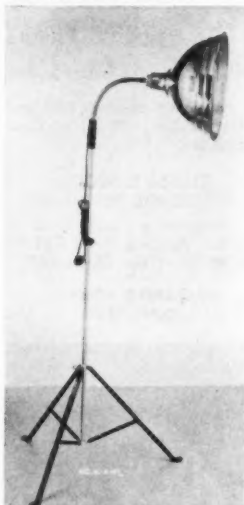
Description: Spherical, for No. 4 bulb. Diam., 13"; depth, 7¾"; with handle. Mounted on 3 section Welterwater stand.

Mfr.: Acme-Lite Mfg. Co., 401 N. Wood St., Chicago, Ill. Approx. price: \$24.13.



ACME-LITE NO. 414-F.L.

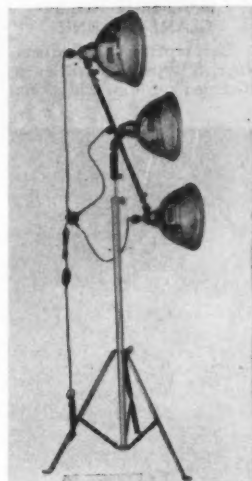
Description: Parabolic reflector, for No. 2 bulb. Diam., 14"; depth, 9¾"; 10" flexible arm with handle.



Mfr.: Acme-Lite Mfg. Co., 401 N. Wood St., Chicago, Ill. Approx. price: \$13.85.

ACME-LITE 3200-L TU-LITE UNIT

Description: Three polished reflectors attached to a patented swiveling crossbar with extension ends; all reflectors are connected at center to 3-way service block



attached to separate 8 ft. extension cord having feed-thru switch. Entire Unit is mounted on 7 ft. 2-section Litewater Champion Stand. Approx. price: \$17.95.

ACME-LITE NO. 918-W MOGUL UNIT FOR

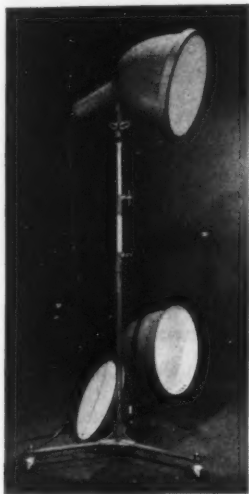


NO. 4 BULB OR PS-52

Description: Heavy gauge parabolic polished reflector with separate nok-down Socket housing for easy nesting. Diameter 18", over-all depth, 14½"; attached to 10" extension arm casting and large handle. Complete Unit mounted on heavy 3-section *wellerwater* Champion Stand.

Mfr.: Acme-Lite Mfg. Co., 401 N. Wood St., Chicago, Ill. Approx. price: \$29.14.

BEATTIE NEWS REEL FLOOD



LITE MODEL NRF

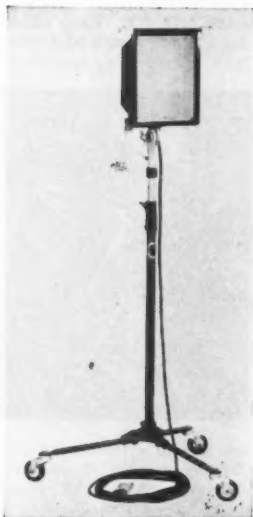
Description: Elliptical reflector 16" in diam. by 11" deep, aluminum alloy reflectors, adjustable socket center lamp sizes from 300 to 2000 watts.

Mfr.: Beattie Hi-Lite Div. Otto K. Olsen Co., 1560 N. Vine, Hollywood, Calif. Approx. price: \$57.50 (tax included).

SINGLE BROAD FILL LIGHT

Description: Perfect soft front fill light. For black & white and color photography. Uses 500 or 750 watt lamps, 25 ft. cable, min. height, 4'6"; max height, 8'6".

Mfr.: Bardwell & McAlister, Inc., Box 1310, Hollywood 28, Calif. Price: \$59.00 inc. Fed. Exc. Tax.



BARDWELL & MCALISTER DOUBLE BROAD FILL LIGHT

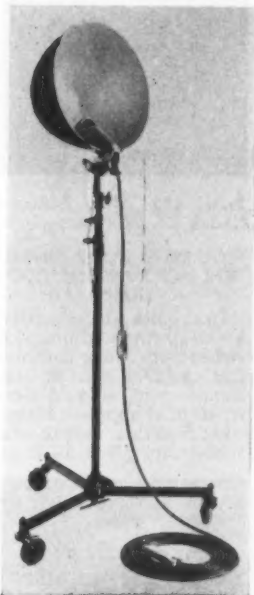
Description: Powerful fill light for large areas. For black & white and color work. Uses two 1000 watt lamps, or two No. 4 photo-floods, individual light switches. 25 ft. cord. Min. height, 4'9"; Max. height, 7'.



wood 28, Calif. Price: \$138.00 inc. Fed. Exc. Tax.

CINELITE

Description: Spun aluminum reflector anodized for softing light. Folding pedestal. Tilting: Elevation and depression controlled by clamp. Takes No. 4 photo-



floods, 500-watt PS-40, 1000-watt PS-40, 3200°K globes. Accessories available: bracket for lowering dome to any point on upright tube, diffuser frame. Write mfr. for current prices.

Mfr.: Mole-Richardson Co., 937 N. Sycamore Ave., Hollywood 38, Calif.

KODAK VARI-BEAM STANDLIGHT

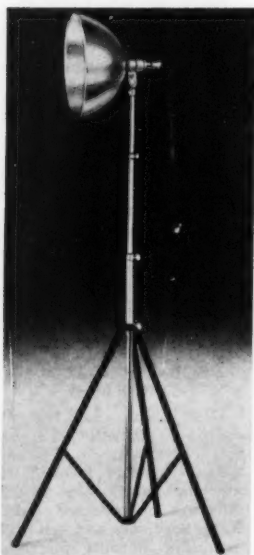
Description: Lightweight aluminum reflector, 12" in dia. for use with No. 2 flood-lamps. Interior finished in semi-matte surface for proper diffusion of reflected light. Ball and socket swivel mounting permits positioning at any angle, and a handle is provided for ease in use. Telescoping Column of stand adjustable from 3 to 5½ feet, locks in place by thumb screw. Anchored by heavy circular base which is rimmed with rubber to prevent damage to floor.



Price: \$15. Mfr.: Eastman Kodak Co., Rochester, N.Y.

FLOU-BRITE NO. 2 SINGLE FOR NO. 2 PHOTOFLOOD LAMPS

Description: 12" diameter, 9" deep spun aluminum, etched both inside and outside. B-LINE No. 600 — 3-section stand, nicked socket, 10 ft. of approved rubber wire, feed-thru switch and rubber cap. Mfr.: M. Black

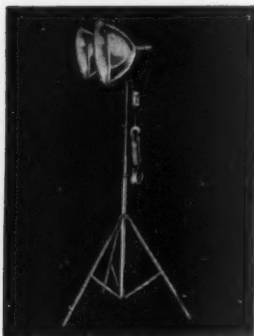


Mfg. Co. 300-304 N. Third St., Phila. Price: \$9.30.

FLUO-BRITE NO. 1 TWIN

Description: 2 Fluo-Brite reflectors, 10" diameter, 6½" deep. Cross arm is attached to the 3-section B-LINE

stand NO. 600. Each socket has 15" of approved rubber wire fitted with caps which



connect to a 10-ft. extension cord approved wire with rubber cap. Mfr.: M. Black Mfg. Co. Price: \$10.60.

FLUO-BRITE NO. 1 SINGLE DELUXE

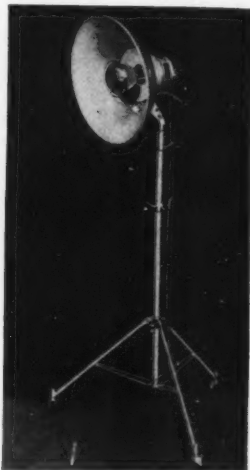
Description: Fluo-Brite reflector, 10" diameter, 6½" deep, B-LINE 3-section stand No. 600. Nicked push-thru socket, 10 ft. of approved rubber wire and rubber cap. Mfr.: M. Black Mfg. Co. Price: \$7.65. Address above.



MORSE M-60 STUDIO LIGHT

Description: 21" anodized reflector, adjustable tilt control handle, adjustable de-

flector for diffusing light. Two separate switches for controlling voltage on No. 4 photoflood lamp. Rigid, telescoping stand mounted on

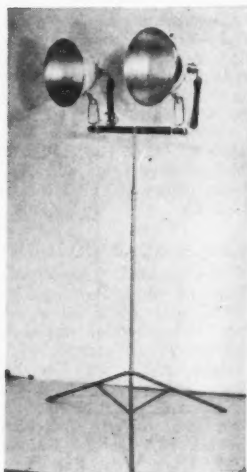


casters. Lamp can be adjusted on stand from height of 18" to 8'. Price: (Complete except for bulb) \$79.50.

Mfr.: Morse Instrument Co., Hudson, Ohio.

PHOTOFLOOD REFLECTOR STAND

Description: Legs fold, cross bar easily removed. Tripod legs remain in position without screws or



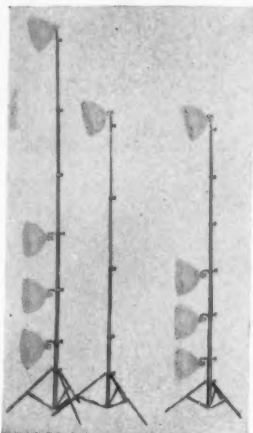
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clamps. Extension rod quickly adjustable, automatically locked. Unique feature permits rotation of extension rod although locked at any height. Stand extends to 63 1/4", folds to 43 1/4". Price: \$4.25 (reflectors not included).

Available through Bell and Howell Co., 7100 McCormick Rd., Chicago, Ill.

PHO-TEL STANDS

Description: Collapsible metal light stands (reflectors not included). Model 103 extends to 11 feet, folds to 23 inches. Leg spread 37", weight 2 1/2 lbs. Price: \$11.95. Model 105 extends to 8 1/4 feet, folds to 23 inches. Leg spread 37",

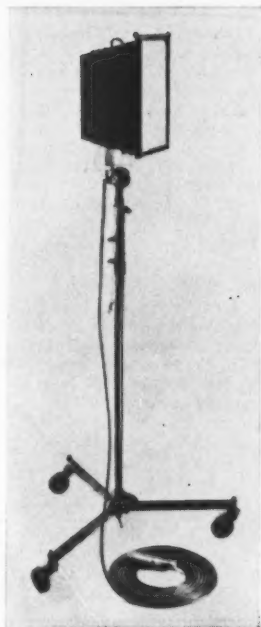


weight 1 1/2 lbs. Price: \$6.95. Model 104 extends 8 1/4 feet, folds to 18 1/4". Leg spread 35", weight 2 1/2 lbs. Price: \$11.95.

Mfr.: Moulin-Lindsay Co., 621 Lebanon St., Los Angeles 14, Calif.

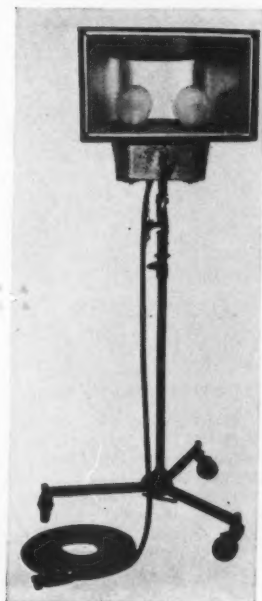
SINGLE SIDE LAMP

Description: Aluminum reflector with glass diffuser. Elevation and depression titling controlled by clamp. Takes No. 4 photoflood, 500-watt PS-40, 1000-watt PS-40. 25 feet rubber-covered cable. Write Mole-Richardson Co., 937 N. Sycamore Ave., Hollywood, Calif. for prices.



DOUBLE SIDE LAMP

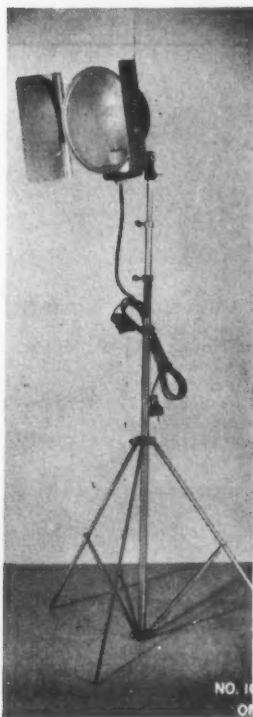
Same in construction as above except that this side lamp is equipped with two



switches and two sockets. Aperture of face is 20" wide and 12" high. Write Mole Richardson Co. for prices.

SUN RAY NO. 105 ON IX TRIPOD

Description: For No. 1 photoflood or 500-watt T-20 bulb. Made of aluminum, brown wrinkle outside, satin finish interior. Diam. 8 1/4"; depth 5". Has two way adjustable side shields, universal arm, porcelain socket,



switch and 15 ft. cord.

Mfr.: Sunray Photo Co., Inc., 295-309 Lafayette St., New York, N. Y. Approx. price: \$16.85.

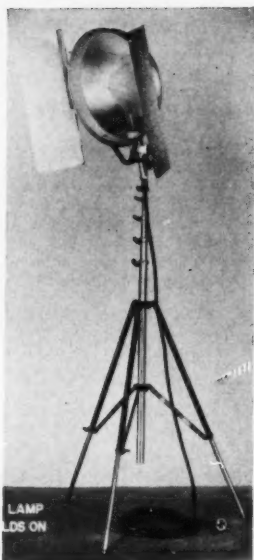
SUN RAY NO. 32 WITH SIDE SHIELD ON NO. 5 TRIPOD (Illustrated above, next col.)

Description: For No. 4 Photoflood or 1,000-watt tubular bulb. Reflector is 13" in diameter and 6" in depth. Black crystal finish outside, satin finish inside. Universal attachable arm, mogul socket. Approx. \$44.10.

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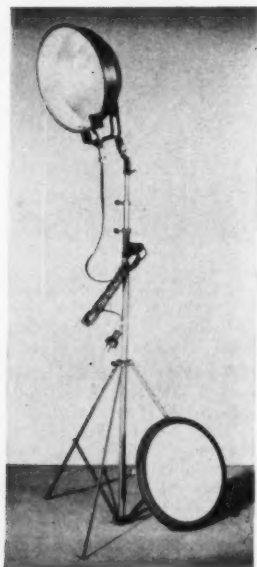
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SUN RAY NO. 206 WITH SCREEN ON NO. IX TRIPOD

Description: For No. 1 or 2 photoflood or a 500-watt T20 bulb. Aluminum brown wrinkle finish outside, satin finish interior. Diam. 10½"; depth, 5"; 15 ft. wire; heavy duty switch. Approx. \$21.00. (Illustrated below.)



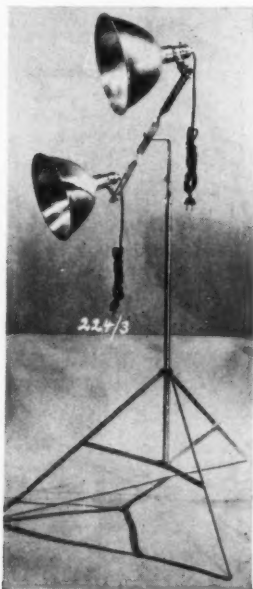
TESTRITE NO. 621/3

Description: Two 11" highly polished reflectors mounted on 3-section stand. Two swing arms permit lights to be turned and used in many positions. Will take either No. 1 or 2 floodlamps. Approx. price: \$12.00. (Not illustrated).

Mfr.: Testrite Instrument Co., 57 E. 11th St., New York 3.

TESTRITE NO. 224/3

Description: 3-section stand with cross bar taking 2 reflectors. Shown with two No. 24 10-inch reflectors of highly polished aluminum. Approx. price: \$10.50.

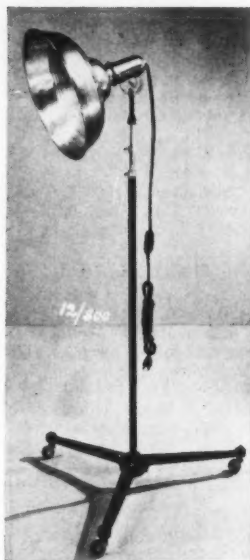


Mfr.: Testrite Instrument Co., 57 E. 11th St., New York 3.

TESTRITE NO. 12/800

Description: No. 12 reflector, 14" with heavy mogul socket. Mounted on studio castor stand which rises to 10 ft. Weight 16 lbs. For use with No. 4 photoflood. Approx. price: \$27.00.

Mfr.: Testrite Instrument Co., 57 E. 11th Street, New York 3.



TESTRITE NO. 11 FOTOLITE WITH WINGS



Description: Mounted on 3-section stand with highly polished reflector. Approx. price: \$17.00.

Mfr.: Testrite Instrument Co., 57 E. 11th St., New York 3.

TESTRITE NO. 121/3

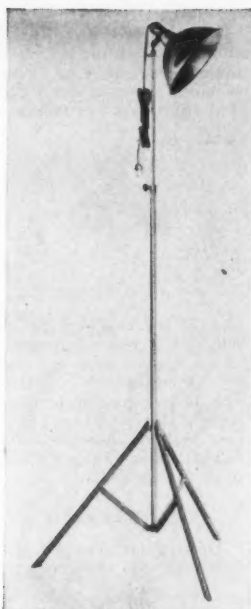


Description: 3-section stand with 11" highly polished aluminum reflector. Will take No. 1 or 2 flood bulbs. Approx. price: \$7.35.

Mfr.: Testrite Instrument Co., 57 E. 11th St., New York 3.

VICTOR STANDARD FOTOFLOOD SERIES

Description: Standard Victor Reflectors mounted on Victor No. 1 stands. Cadmium plated stands are in two sections, 6½' elevation, automatic leg lock. Single unit (illustrated) have sockets with heat-proof tips and 10 feet approved rubber cord and plug assemblies. Prices in various reflector sizes range from \$6.25 to \$7.10 complete. Victor Twin Stand Units (not illustrated) support two reflectors on adjustable arm. Keyless sockets with short individual cords connecting to cube-tap on 10-foot rub-



ber cord. Choice of 9" to 11" reflectors. Prices: \$9.20 to \$10.90.

Mfr.: James H. Smith & Sons, Lake and Colfax Sts., Griffith, Ind.

VICTOR HI-LO TWIN FOTOFLOOD UNITS

Description: Two 12" reflectors, 9½" deep (for No.



2 lamps), mounted on a No. 40 Victor Stand. Unit supplied with 10 ampere size Victor Hi-Lo Switch with load capacity of four No. 1 photofloods, or two No. 2 photofloods. With switch set at "Low," lamps are connected in series and burn at half intensity; with switch set at "Hi," lamps are connected in parallel and burn at full intensity. Price: \$22.35 complete. Hi-Lo switch only, \$6.40.

VICTOR R-L UNITS FOR REFLECTOR LAMPS

Description: The R-L series provides both clamp-



on and stand mounting for reflector lamps of all kinds. Also available are R-L twin stand units. Nickel-plated adjustment arm permits movement of lamps without danger of contact with hot bulbs. Clamp and collar assembly provides swivel action. Complete with push-through socket switches, 10 feet rubber cord, and plug. Prices: R-L Clamp-on Units No. 80, \$2.45. R-L Single Stand Units No. 811 with two section No. 1 Victor Stand (as illustrated), \$5.55. R-L Twin Stand Units, two section stand, \$8.25. All units tax exempt.

Mfr.: James H. Smith & Sons, Lake and Colfax Sts., Griffith, Ind.

HANDIE-BAR MOVIE LIGHT

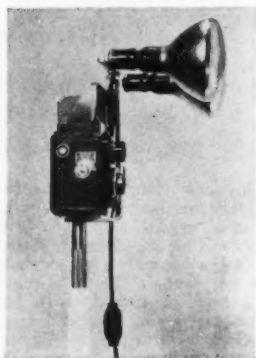
Description: Designed to be used with or without a tripod. Individually-controlled light sockets mounted in swivels at either end may be swung with the camera or pointed separately. Illumination furnished by either photoflood reflector bulbs or spotlight bulbs. (Bulbs not included.) Price: \$5.51 (without tax).

Available through Bell and Howell Co., 7100 McCormick Rd., Chicago, Ill.



BENSEN LITE

Description: Designed for still or movie cameras. Compact aluminum stand (wt. 20 oz.) holds two reflector bulbs above camera lens.



Master switch controls both lights. 20 feet of cord. Exposure guide covering all types of film supplied with each Bensen Light.

Mfr.: A. L. Bensen & Co., 100 Innis St., Staten Island 2, N. Y. Price: \$5.98 plus tax.

TRAV-A-LITE

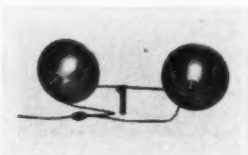
Description: Pistol-grip aluminum and plastic light support. Wt. 34½ oz. Can be mounted on tripod if desired. Supports two reflector



flood or reflector spot lights. Will also accommodate regular aluminum reflectors and photoflood lights. Supplied with 11-foot cord and master switch. Mfr.: Trav-A-Lite Co. 3628 W. Pierce St. Milwaukee, Wis. Price: \$9.00 plus .75c excise tax.

VICTOR ARM-LITE

Description: Two 11" dia. spun aluminum reflectors for

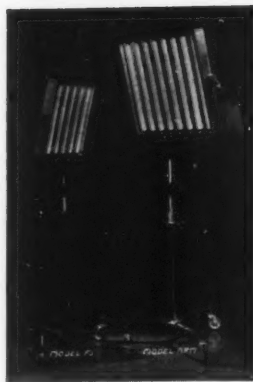


No. 2 Photoflood lamps. Lightweight construction (8 lbs. 15 oz. complete with lamps). Aluminum bar hinged for compact carrying. Reversible camera platform provides suitable mount for all cameras; permits changing positioning of camera. Base of knurled aluminum handle also permits mounting on tripod. 15 feet approved cord, TEC switch in cord line. Price: \$9.95. Mfr.: James H. Smith & Sons Corp. Griffith, Indiana.

BEATTIE DUAL-SERVICE FLUORESCENT MODEL FS (Left) MODEL ARM (Right)

Description: Model FS designed as source of shadow illumination; five 18" tubes; 3 section stands; maximum height, 9 ft. Model ARM 8-24" tubes otherwise similar to FS.

Mfr.: Beattie Hi-Lite Div. Otto K. Olsen Co., 1560 N. Vine, Hollywood, Calif. Ap-



prox. price: \$80.50 FS; \$120.75 ARM, tax included.

KODATRON STUDIO SPEEDLAMP

Description: A new speedlamp which is twice as powerful as the Kodatron Speedlamp previously offered. Brilliant flash lasts approximately 1/5000 sec., permits use of lens apertures of F:11 to F:16. Flashtube and polished reflector mounted on telescope-type lamp stand which supports power unit designed to furnish power for 1, 2, or 3 flashtubes. Speedlamp operates on 110 to 125 volt, 60 cycle alternating current, but can be



used on direct current with converter. Maximum current consumption of 500 watts required only while condensers are being charged—about 10 seconds for each flash. Price: \$600 plus tax. Mfr.: Eastman Kodak Co., Rochester, N. Y.



For ACTION shots—insist on GRAFLEX!

This startling action photograph of a hurdler typifies the kind of pictures you can take with a Graflex-made prize-winning camera. Whether you're interested in outstanding pictures of *general subjects* or unusual photographs with

excellent definition, look to the famous Graflex line of precision equipment. See your Graflex Dealer. For literature describing prize-winning cameras, write to Room 220, Graflex, Inc., Rochester 8, New York.

ENTER THE 1948 GRAFLEX PHOTO CONTEST — \$5000 IN PRIZES

With any Graflex-made camera you can take pictures that may win a prize in the great 1948 competition. 62 prizes! Two divisions: *Action* and *Fea-*

ture! Three big groups: Teen-agers, Non-professionals, Professionals! *Plus* Color Section! Get entry blanks from your dealer.

GRAFLEX PRIZE-WINNING CAMERAS

Western Division, 3045 Wilshire Blvd., Los Angeles, Cal.
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Minicam

PHOTO DATA

CLIP SHEET FOR PERMANENT REFERENCE

The Care and Feeding of Cut Film Holders

The care of cut film holders begins the instant you unwrap them. That desire to whip out a slide and see what the holder looks like inside should be control'ed with a firm will. Look the holder over carefully and you'll see that the natural enemy of cut film holders, dust, is already at work. There is dust or tiny pieces of bardsboard on the slide and if you had obeyed your first impulse you would have pulled that dust up into the light trap to plague you at some future date.

Start Out on the Right Foot

The first thing to do before you load your new holders is to pick the most dust-free spot available for your loading table or bench. Be certain the table has been wiped off with a damp cloth. Be an old maid about your darkroom house-keeping. It's easier than spotting.

Dust each holder with a brush that is used only for this purpose. A dollar or two invested in a good brush, which should be kept in a box or drawer and occasionally blown out with moisture-free air, will prove to be a sound investment.

Dust the holder on each side before pulling the slides. Place the slides on your loading bench, at the left side unless you are a southpaw, with the WHITE sides up. Then dust the inside of the holder carefully before placing it on top of the two slides. Continue this procedure until all your holders are stacked up ready to load. Place the unopened package of cut film handy to your right hand.

Turn Out the Light

Unwrap the film. Whether you are going to load a full box of film or not, leave the film in its original little pile with the wrapping paper spread out underneath it. It is good policy to always move slowly and with deliberation when you're loading film. Tossing the package around, banging the loading bench of any other unnecessary quick or rough motions all tend to stir up

and circulate any dust in the room.

Keep your hands clean when loading film. Don't rub your nose or scratch your head (even when you're puzzled) while loading film or you'll transfer natural skin oils to the holder or the film.

Get the unwrapped film in such a position that the notches are in the upper right-hand corner, which assures you that the sensitized portion of the film will be toward you if you pick it up by the notched corner. Pick up the holder in your left hand with the hinged part at the top, holding the hinged portion straight with your forefinger. Pick the film up with your right hand and insert into the holder. If the film is inserted so that the notches are in the lower left-hand corner of the holder you will be able to identify it later without completely removing the dark slide or film. Be sure that the film goes in straight and under the film guides on each side of the holder. Pick up the slide, which will have its white side up, insert in the holder, turn the holder over, repeat the procedure and set that holder out of the way before you begin to load the next one. As you insert each slide, check to see that the white sides are out by feeling the dimples which appear on the white side only. Broken slides are a nuisance.

Keep the Slides Straight

Don't bend the slides or use force. If you're putting them in straight and the holders are properly made, no pressure is necessary.

Use the same caution in withdrawing the slides or re-inserting them at all times. Pulling the slides forward while withdrawing them not only leads to breakage but to light leaks. This is also true when inserting the slides. Admittedly it would be troublesome to stop and brush off a holder before putting it into the camera when you're out shooting, but it only takes a second to brush them off

(Continued on page 106)

A Complete **PRESS** Camera



NEEDS **3** LENSES

RAPTAR



SERIES II f4.5...

FOR EXTRA SPEED—THE BASIC LENS

RAPTAR



WIDE ANGLE f6.8

FOR FULL COVERAGE AT CLOSE QUARTERS

RAPTAR



TELEPHOTO f5.6

FOR CLOSE-UPS OF DISTANT OBJECTS

(Lenses for 2 3/4 x 3 3/4 Press Cameras, Illustrated)

The Series II Raptar takes care of all situations that call for a fast, normal focus lens. The Raptar Wide Angle lens gives you the wider coverage you need when you can't back away far enough to include the whole subject. The Raptar Telephoto lens allows close-ups of sports action, distant mountain peaks and other far away shots, head and shoulders portraits where good drawing and perspective are needed. Enjoy the satisfaction of being fully equipped for any picture with these three Wollensak Raptars... quality lenses that give you finer definition, sharp brilliant images. Ask your Wollensak dealer.

**RECOMMENDED LENSES
FOR PRESS CAMERAS**

2 1/4 x 3 1/4	3 1/4 x 4 1/4	4 x 5
SERIES II RAPTAR f4.5		
focus	focus	focus
101 mm	127 mm	*135 mm
RAPTAR f6.8 WIDE ANGLE		
65 mm	65 mm	90 mm
75° angle	88 1/2° angle	84° angle
RAPTAR f5.6 TELEPHOTO		
8"	10"	10" or 15"

Available in shutters or iris barrels
*Speed 135 mm focus f4.7

Booklets Available on all Lenses

Wollensak
MEANS FINE LENSES

OPTICAL CO., ROCHESTER 8, N. Y.

Minicam

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with a clean handkerchief or blow those little specks away before you put the holder into the camera. Loaded holders should always be kept in a case for protection. The case, of course, should also be cleaned out frequently.

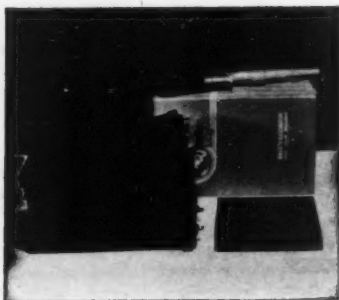
Don't load or store holders with near developer or hypo in a tray. If you store them in a room where the air is moist and laden with hypo, you are certain to have trouble with pin holes due to the drying and subsequent crystalizing of the hypo. While we are speaking of cleanliness—

Don't Lay Holders on the Ground

Where they will pick up dirt, grease, grass, moisture and dust. Never subject holders to dirt in any form.

Another fine reason for avoiding open exposure of holders is the fact that excessive exposure will sometimes fog the film even though the holders are light tight. Most slide holders are infra red proof but most holder slides will transmit infra red rays and prolonged exposure to sun light will result in fogged film. It is advisable to keep your case closed as much as possible also.

If you have two or more types of film loaded in your case or color and black and white it is quite important to have some—



Identification of Holders

Identification of holders by means of adhesive tape causes both out of focus pictures and fogged negatives. Cut film holders are manufactured to very close tolerances and the additional thickness of tape may change the film plane enough to cause trouble. It may also prevent the holder from fitting properly into the back of your camera. Many professional photographers write identification on the cover plate of the holder with a very soft lead pencil. This can be removed with a damp cloth. If a china marking pencil is used the markings can be removed with carbon tetrachloride. While we are on the subject of identification here are a couple of tips to avoid—

Accidental Double Exposure

Always have the white slides out on unexposed, loaded shoulders. As each exposure is made reinsert the slide with the black side of the slide out. When inserting the slide don't try to locate the opening with only one corner of the slide, or you might fog the film. Push the slide straight down without bending and with both corners entering simultaneously. When both sides of the holder have been exposed put the holder back into your case upside down as an additional precaution against grabbing the wrong holder. Keep different types of film in separate sections of your case whenever possible even though you have each holder marked. A slip of paper or a piece of cardboard separating one type of film from the other will serve as a reminder.

Last Minute Reminders

Keep holders and slides clean.

Stop at a gasoline station occasionally and blow out the holders and light trap with compressed air.

To remove any particles from the light trap without compressed air, stand the holder on edge and tap it sharply with your brush handle.

Keep your negatives clean and they will give you longer life and more trouble free use.

—George Boardman

Nothing else like it—

THE ORIGINAL AND ONLY TRUE INCIDENT LIGHT
EXPOSURE METER

The NORWOOD Director

SOMETHING NEW UNDER THE SUN!



After a generation of determining exposure by reflected light readings, the NORWOOD DIRECTOR, incident light exposure meter was developed. Tens of thousands of photographers, professional and amateur, at once recognized the merit of a photoelectric meter designed especially to measure all of the light falling upon the camera side of the subject, i.e., the incident light. Here was something new—scientifically correct, and practically infallible in determining the one best shutter and diaphragm combination for every shot. Therein lies the secret of the tremendous success and great demand for the NORWOOD DIRECTOR!

THE METER WITH THE PATENTED PHOTOSPHERE*

Only the Norwood Director is equipped with the amazing Photosphere—the 3-dimensional light collector and integrator which gathers and distributes directly to the photoelectric cell all of the incident light illuminating the camera side of the subject.

SWIVEL-HEAD

The Photosphere, mounted in a swivel-head, permits turning in any direction for light gathering and leaves the dial always facing the photographer for quick readings. This is also an exclusive feature of the Norwood Director.



*REG. U. S. PAT. OFF.

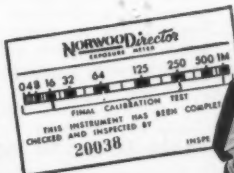
ACCURACY—Tests have proven the superiority of the incident light method of determining exposure; thousands of owners have written unsolicited testimonials as to the accuracy of the Norwood Director. Make the Norwood Director, the finest of all exposure meters, a companion to your camera and you will produce prints of which you will be mighty proud.

CONSISTENCY—Whether your shots are made indoors or outdoors, closeups or landscapes—regardless of a great variation in shutter speeds and diaphragm stops used—your black and white negatives and kodachrome transparencies, made at the direction of the NORWOOD, will have a consistent density.

The NORWOOD DIRECTOR was designed primarily to measure incident light; it is the only true incident light exposure meter.

CALIBRATION CERTIFICATE

The Norwood Director is a precise instrument manufactured to close tolerances, and referenced to the internationally known standard—the foot candle. Calibration is made in reference to lights supplied by Bureau of Standards and other nationally known laboratories. Every Norwood Director is given a final, four point calibration check and the performance of the meter is recorded on a certificate and packed with that meter, thereby assuring the purchaser of the accuracy of his instrument when it left the factory.



COMPLETE with steel case, neck cord, Instruction Manual, ASA Indexes, Registration-Guarantee Card, and Calibration Certificate.

\$29.95 PLUS TAX



Write FOR ILLUSTRATED BOOKLET, "CORRECT EXPOSURE DETERMINATION." DEPT. N.D.

AMERICAN BOLEX COMPANY, INC., 521 FIFTH AVENUE, NEW YORK 17, N. Y.

DUCTS·NEWS ABOUT NEW PRODUCTS·NEWS



Take Your Darkroom With You

There is no need to confine your developing and printing to your own dark room—especially if you use the FR Home Developing and Printing Kit. This kit contains the recently introduced FR "Special" Model 2 Adjustable



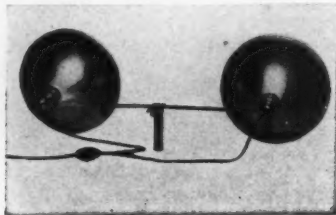
Roll Film Developing Tanks, bottle of developer, Fixol, 3 Printrays, Printing Frame, Safety Colored Darkroom Bulb, 2 Stainless Steel Film Clips, a package of Contact Printing paper and an Instruction book, completely illustrated and written so that any one can understand it.

The entire kit weighs but five pounds and can be conveniently carried about like a small suit case as illustrated. \$7.95, including tax.

The FR Corporation
951 Brook Ave.,
New York 56, N. Y.

Light Follows the Camera

The lighting problem of indoor photography for stills and especially for movies, is greatly simplified by the Victor ArmLite. As illus-



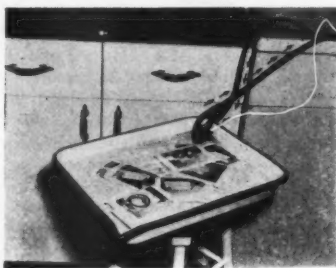
trated, the ArmLite follows the camera which is mounted on the light arm thereby assuring adequate lighting on moving subjects.

The ArmLite uses two 11" diameter Victor Reflectors, which, with No. 2 Photofloods, equal the subject illumination of 4RFL—2 bulbs. The unit is lighter than you would expect it to be. It comes in a corrugated carrying case 12" square—\$9.95.

James H. Smith and Sons Corp.,
Lake and Celfax Streets,
Griffith, Ind.

Print Washing Simplified

If, when you are ready to wash your prints, you find the sink cluttered with bottles and the like, the Hydrojet Photo Washer will solve your problem. This film-print- and enlargement-washer has a 3'8" length of inlet and outlet tubing that will permit you to wash prints anywhere near the sink. It takes fresh water



to your tray and removes it without any danger of overflowing.

The Hydrojet will operate in trays 8x10 or larger; its action is particularly good in a round pan approximately six inches deep and 18 inches in diameter, or larger. When used this way its jet pumping action produces an active rotary motion which enables many prints to be washed at the same time. \$3.95.

Hydrojet Corp.,
300 W. Jefferson Ave.,
Tranton, Mich.

Da-Lite Screens for 16mm

Realizing the ever-increasing development of 16mm movies in schools, churches, homes, and industry, the Da-Lite Screen Co., has a new screen especially for this purpose. The Picture King of "40th Anniversary Model" comes in seven sizes from 45x60 to 72x96 and retails for \$48.75 to \$95.00. Its features are: con-

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Please send me your Course of Instructions on Sensitizing and the Sensitizer Outfit. Enclosed find Check ☐ Money Order ☐ for \$10.00. I understand that my money will be returned if the process does not satisfactorily fulfill your claim.

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cealed gooseneck, tenite slat collar, slat lock, red tenite control knobs, aluminum equalizing slat saddle, and critical leveler.

The larger screen tripod weighs only 35 lbs. and is sturdily built of pressed aluminum.

De-Lite Screen Co.,
2711 N. Pulaski Rd.,
Chicago 39, Ill.

Weston Ivercone for Incident Light

All Weston Master Universal exposure meters can be converted for incident light measurement by snapping an auxiliary device, known as Ivercone, into place over the photocell of the meter. Camera settings are selected from the exposure guide dial in the usual manner.



\$3.00.

Weston Electrical Instrument Corp.,
447 Frelinghuysen Ave.,
Newark 5, N. Y.

Gold's New Spotlight

When it comes to projection equipment—don't overlook Gold's. They are now marketing the Hi-Liter, an entirely new and modern 100-150 watt spotlight for photographers. The Hi-Liter is convenient, versatile and efficient and is especially useful in spotlighting still lifes and portraits or special highlight effects. It is attractively designed and finished in rich Sierra Brown baked enamel. It has a 360 degree tilt and can be aimed in any direction. It has its own sturdy base.

It has double walled lamp housing for greater cooling; an 8-foot extension cord and plug; weighs 2 lbs.; and measures 6½"x4"x5". \$10.00, less lamp.

Gold's Manufacturing Co.,
1214-1222 W. Madison St.,
Chicago 7, Illinois

Make Own Bulbs for Color Photography

An important contribution to the advancement of indoor color flash photography is Jen-Dip, a liquid that gives ordinary flash bulbs a blue coating ideal for color photography. It takes just five seconds to coat GE bulbs, and only four seconds for Sylvania (Wabash) bulbs. The savings for each bulb compared to buying blue flash bulbs is 9c each since a bottle of Jen-Dip costs \$1.50. A beaker for dipping is included. The manufacturer claims that the approximate cost of coating a bulb is ⅓c. Jen-Dip is non-inflammable.

Jen Products Sales Co.,
419 W. 43rd St.,
New York 18, N. Y.

Eastman's New Book on Color

A completely descriptive and non-mathematical book on color for all persons interested in the subject is entitled "An Introduction to Color" by Ralph M. Evans, Superintendent of Color Quality Control at Eastman Kodak Co.

Eastman Kodak Company,

Rochester 4, New York

THE LAST WORD

(Continued from page 8)

In Photography. Can you advise me how to obtain more information about the school, the courses offered, and the provisions for enrollment?

Keene, N. H.

HAROLD SOUCISE.

• Further information concerning the Kent State University Short Course for press photographers can be had by addressing inquiries to James A. Fosdick, Executive Secretary, Photo Short Course, Kent State Univ., Kent, O.—Ed.

Solarization More Simplified

Sirs:

I just read in MINICAM for Sept. the *Solarization Simplified* article on solarizing negatives, and it made pretty good sense. Still, it seems to me most photo magazines take 1000 words to say what can be said in 100. I'll bet I could tell how to solarize a print in not more than 50 words. Does this do it?

Use a gusty negative; expose on No. 4 paper because print solarizing degrades highlights. After 20 seconds developing, flick on 60 watt white light, 5 feet away, for one second. Finish normal development. If effect is too dark, move tray further away (or shorten white light time) and vice-versa. (Negative solarization is better.)

I am sending you my friend Harvey Croze's picture to illustrate.

Gambier, Ohio.

JAF WALKER.

• You did it.—Ed.



LIGHT METER TESTS **PROVE**
VICTOR GIVES YOU...
 GREATER LIGHTING EFFICIENCY
 AT **LOWER COST**

Light meters are factual. They record results—not claims. And light meter tests invariably prove VICTOR units give most light at lowest cost. The reason—scientifically designed with frost-etched interiors. VICTOR gives you most, too, in durability and ease of handling.

There is a VICTOR Unit to meet every lighting need—in photo-flood or photoflash—at moderate prices.

For best results, insist on VICTOR—for 74 years, the Lighting Units of proven superiority.

No. 851—Mini-Boom Light, for exceptional versatility and wide range of positioning from floor to 10 ft. elevation. Weighs only 4¾ lbs. . . . \$8.95. Complete.

No. 621—Twin Stand Unit with two 11" reflectors, 9" deep (for No. 2 Lamps) . . . \$11.05, Complete.

No. 611—Single Stand Unit with same features as No. 621 . . . \$7.10, Complete.

No. 250—Clamp-on Unit with 11" reflector, 9" deep for No. 2 Lamp. Special swivel assembly guarantees firm, sure hold in any position . . . \$4.70

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 GRIFFITH, INDIANA

Lighting the Way to Better Pictures Since 1874

GADGETS, KINKS AND SHORT CUTS

Using War Surplus Polaroid Attachments

Photographers who like to work on tabletop set-ups have probably experienced the difficulty of balancing light intensities when two or more small spotlights are used. Moving a particular spot further away is not always the solution since this often spreads the light into areas where it is not wanted.

An inexpensive and yet very efficient solution is the use of certain war surplus polaroid attachments which have been quite easy to obtain. These consist of a rigid metal mount containing two polaroid filters put together so that one of them may be rotated by means of a small projecting arm. These filters are a little over two inches in diameter and are therefore ideal for small spotlights. They cost less than \$1.00 and are labelled "Polaroid Variable Density Attachment-335; for "K" Sight-Sperry Part No. 206152".

Once the filters have been mounted before the lenses of the spotlight, all that needs to be done is to arrange the lights as desired and then vary the intensities by simply moving the lever arms which rotate the filter discs.

Simple Guide for Adjusting Photo Margins

When making enlargements of different sizes, where the width of the margin must be varied, it is seldom that this adjustment is made without the margin or at least the first print being off. The illustrated margin guide will eliminate this trouble.

With straightedge and pencil, lay out the desired margins on the back of an undeveloped piece of paper of the size being used. Don't use a discarded print because the paper shrinks in processing and this will throw you off. Ink in the margin lines if you like.

Placed in position on the easel, the lines will not only indicate where the mask arms are to be set, but will remind you to change the position of the hidden inner corner guide as well.

Warmer Print Image Tones

Most photographers know that aged and partially exhausted fixing baths are claimed to produce print of high quality, but of uncertain permanence. And older fixing bath apparently prevents muddy shadows, an important factor when prints are heat-dried.

The partially exhausted fixer produces a slight amount of silver sulphide which yields warm rich tones in the print. But the permanence of the resulting print is poor. However, this can be corrected by first fixing the print in an old fixing bath, then placing it in a freshly-mixed fixer to assure print permanence.

Vegetable Faces

(Continued from page 48)

dry, examine one of them for character possibilities. Does a bulge on the side of the vegetable suggest a nose. Does a hollow look like a closed eye, a mouth, or a cauliflower ear? Twist the print around, look at it sidewise, and try it upside down. Before you know it features will begin to suggest themselves and faces will begin to pop out from all angles. When this happens, charge a brush with India ink or black post card paint, and draw in simple features where they seem to suggest themselves most readily. (Fig. 1.) The results will probably surprise you, but don't stop with the first face. Try it again with another enlargement; one tomato may suggest half a dozen faces.

The second step is to select the best vegetable face you have been able to caricature, and rephotograph it. In making your copy negative be sure that the lighting is even and the subject is in perfect focus. From the copy negative you will be able to make as many prints as you want on double-weight matte paper. (Opal G was used for the accompanying illustrations.)

When the copy print is flat and dry, place it on a piece of glass and cut out the vegetable face. A razor blade will give a



SAVE ON CHEMICALS WITH NIKOR TANKS



NIKOR tanks are thrifty *all ways!* On chemicals for example, only 8 oz. of solution is needed to develop a 5 ft. 35 mm. roll in the No. 35 tank. Similar solution economy in the larger tanks. But the big economy is due to their solid stainless steel construction. They can't chip or break . . . the lustrous

surface can't corrode or tarnish . . . therefore they last a lifetime. Their design, too, makes loading and daylight filling quick and easy: provides for free circulation and uniform agitation, resulting in even and perfect development. See NIKOR tanks at dealers today or write for literature.

Prices including all excise taxes as follows:

No. 1, for V. P. Roll Film	\$ 8.50	Extra Reels, regular models, any size . . .	4.30
No. 2, for $2\frac{1}{4}$ " x $3\frac{1}{4}$ " Roll Film	8.50	Stirring Rod & Print Paddle65
No. 4, for $2\frac{1}{2}$ " x $4\frac{1}{4}$ " Roll Film	8.50	Extra Tall Can, with plain cover and lifting rod, 12", to take seven 35 mm. or four No. 120 reels, without reels	11.50
No. 5, for $3\frac{1}{4}$ " x $5\frac{1}{2}$ " Roll Film	11.65	Ditto, 17", to take eleven 35 mm. or six No. 120 reels	13.50
No. 6, for $3\frac{1}{4}$ " x $4\frac{1}{4}$ " (Kodak Film only)	11.65	Ditto, 22", to take fourteen 35 mm. or eight No. 120 reels	15.00
No. 33, for two 35 mm. 40-exp. rolls	11.85		
No. 35, for one 35 mm. 40-exp. roll	7.50		
Adjustable Cut Film and Film Pack Tank . . .	16.50		
Multiple Developing Tank, without reels . . .	7.90		

Also, New Nikor Safety Trimmer with guarded cutter wheel in place of dangerous shearing blade. 21"x21" size, \$24.50 . . . 12"x12" size, \$14.50.

BURLEIGH BROOKS CO., 120 W. 42nd St., New York 18, N. Y.

SPECIAL SALE OF USED PRESS CAMERAS

For those advanced amateurs who feel they are ready to move on to professional picture taking, Abe Cohen's Exchange is offering this fine collection of used Press Cameras. Many are like new in everything except price, and all have been checked by our camera experts for long life and excellent performance. These are but a few of the tremendous collection to be found at Abe Cohen's. All are subject to prior sale so write today.

4 x 5" Speed Graphic, 5 1/4" Zeiss Tessar F4.5, Press Compur, Kalart Range Finder, Abbey Synchronizer, film pack adapter.....	V.G.	\$165.00
4 x 5" Speed Graphic, 6 1/4" Ilex Paragon F4.5, Acme Synchro, Kalart Range Finder, sunshade, filter, wide angle bed.....	V.G.	150.00
4 x 5" Press King, 7" Goetz Dagor F6.8 Compur, Graflex Solenoid.....	Exc.	135.00
4 x 5" Ernemann Sportzaman, Graphic back, 5 1/4" F6.3 lens, compur shutter.....	V.G.	\$7.50
4 x 5" Technika Linhof, 5 1/4" Rodenstock F4.5, compur shutter Graflex Synchronizer.....	L.N.	220.00
3 1/4" x 4 1/4" Speed Graphic, Zeiss Tessar F4.5, compur shutter, Kalart Range Finder, King Sol Synchronizer, Sisto gun.....	V.G.	140.00
3 1/4" x 4 1/4" Speed Graphic, 5 1/4" Zeiss Tessar F4.5, rim set compur, Kalart Range Finder.....	V.G.	130.00
2 1/4" x 3 1/4" Anniversary Speed Graphic, Skopar F4.5 rim set compur, Kalart Range Finder, Focus spot, Heiland Synchronizer, 3 holders, film pack adapter.....	Exc.	150.00
2 1/4" x 3 1/4" Speed Graphic, Kodak F4.5 lens, rim set compur, Kalart Range Finder.....	V.G.	125.00
2 1/4" x 3 1/4" Anniversary Speed Graphic, coated optar F4.5, Graphex shutter, Kalart Range Finder, film pack adapter.....	L.N.	145.00
2 1/4" x 3 1/4" Anniversary Speed Graphic, Ektar F3.7 lens, supermatic shutter, Kalart Range Finder, Heiland Synchronizer, film pack adapter, case.....	Exc.	175.00
2 1/4" x 3 1/4" Busch Pressman, Raptar F4.5, Rapax shutter, Kalart Range Finder, King Sol Synchronizer, film pack adapter.....	L.N.	120.00
2 1/4" x 3 1/4" B&J Press, Rodenstock F6.3, Ibsor shutter.....	Exc.	55.00

Abe Cohen's Exchange features the new

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- Luminous View Finder
- Built in Range Finder
- Built in Speed Flash
- Built in Focuspot
- Automatic Track Lock
- Electric Shutter Release

\$379.50

and a host of other features that make this one of the finest cameras in years.

Write for "bargain" booklet #201 and price list for film, paper, flash bulbs, chemicals.

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"THE HOUSE OF PHOTOGRAPHIC VALUES"

ABE COHEN'S EXCHANGE, INC.

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cleaner edge than will scissors. (Fig. 2.)

Place the cut-out on a piece of tec board or plywood and carefully trace around the edge. If you use plywood, glue a piece of brown wrapping paper to the surface first in order to provide a surface upon which the cut-out can be mounted. (Tec board, being a thin piece of wood sandwiched between two pieces of cardboard, already supplies this surface.) (Fig. 3.)

The tracing should be cut out with a fret saw with as much neatness and exactitude as possible. The reason the print cut-out and the backboard are cut separately is that the photographic emulsion is tender and when both are sawed out together the emulsion has a tendency to shred.

After the edges of the backing have been smoothed with fine sandpaper, the vegetable face can be mounted to it by spreadin a coat of vegetable glue over the surface of the backing (Fig. 4.) and placing the cut-out in position, smoothing it out firmly from the center.

If you are acquainted with the process of dry-mounting, using either a press or a household iron and dry-mounting tissue, this method will prove effective for mounting the cut-outs.

The final stage of preparing a vegetable face consists of coloring the mounted face with Marshal Oil Colors, Kodak Water Colors, or a similar product. (Fig. 5.) With a wad of cotton a little color (the vegetable's natural color) is rubbed into the print until the entire surface has been given an even coat of transparent color. The face can then be touched up with other colors; red for the lips, blue for the eyes, etc. With a small hole drilled in the top, or a clothes hanger pasted to the back, the vegetable face is ready to add a whimsical touch to whatever wall it decorates whether it be the wall of a fruit store, or the wall of your own kitchen or den.



G-E midgets

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THE WHOLE PARTY

You can be sure of plenty of light to picture baby's first birthday party, and many other happy occasions *when you shoot with G-E Midgets*. It's the quick, easy way to get precious detail and action.

More and more G-E flash bulbs are available. But good things go fast. If your dealer cannot supply you, try G-E Reflector Photofloods or Photospots in Triangle Lighting.



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ESCO SLIDE BINDERS ALUMINUM - GLASS

**For 35mm. Transparencies
To Fit Standard 2"x2" or
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Lintless Fibreboard Masks — No need to remove glass to clean transparency.

Easy to Mount — Just slide together — no broken fingernails.

Glass Protection — No warping or scratching.

Re-usable — Economical.

Durable — no glue — no paper.

Automatic Centering — of transparency in Binder.

**At this New Low Price \$1.65
Box of 18 Binders.....**

Including 18 masks and 36 cover glasses.

NEW - IMPROVED - LINTLESS

35mm Bantam
Fibreboard — Glass Slide Binders

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Attractive box of 100 masking covers and 200 glass plates.

35mm. \$2.85 Bantam \$2.95

Also available in boxes of 20

See Your Dealer or Write

ERIE SCIENTIFIC CORPORATION

257 Franklin Street, Buffalo 2, New York

SPEEDLIGHT Freezes It

(Continued from page 37)

Q.—What type of pictures could be made better and easier by using electronic flash aside from the fun of stopping the action of an electric fan and freezing the "punch" of a prize fighter?

A.—Speed light is used for "time-and-motion" study in industry; for close-up hospital work where the consistency of light is most important (you might be interested to know that speed flash has been used soothingly at Harvard Medical School after a patient has had an eye operation. The eye is in a delicate condition and the speed flash can be used to make color pictures, which can be studied and checked. The speed light is much easier on the eye than any other kind of light would be); technical study graphs, and nearly all indoor sports. The amateur will find that speed flash provides the means of making, at little cost, outdoor pictures of people that have no heavy face shadows. The contrasty effect of mid-day pictures can be brought into a pleasant and printable range by using the flash as a fill-in light. The professional has long used flash-bulbs for this purpose. The speed flash provides fill-in light at a cost of less than a cent a flash.

Q.—Is there a difference in the quality of speed light over that of the flash bulb?

A.—Very much. The Kelvin temperature of the High Speed Light being in the neighborhood of 6500 (about like afternoon sunlight) means a softer, more penetrating light on skin tones than that of the flash bulb (appr. 4000) which tends to block up flesh tones on panchromatic film. Speed lighting, when used in baby portraiture and wedding work, shows up details much more clearly. Kelvin temperature is part of the answer, and the high impact speed of the light is believed to be another. Speed light negatives have a sharpness and freedom from grain that gives us the idea that it effects the film emulsion in a way that is different from ordinary flash.

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**THIS AREA
IS ENLARGED
15 TIMES**



TOP IMAGE QUALITY . . . at any Enlargement with Bausch & Lomb Enlarging Lenses

● Ever see a 15X enlargement of a picture of a sheer stocking thread? Sharp and clear, isn't it? And you don't have to strain to see all the wealth of textural detail in the stocking weave, either. Another striking example of *top image quality*, even though this is a printed reproduction.*

Enjoy the thrill of seeing your *own* negatives enlarged in *true* detail and subtle tone . . . use a B&L enlarging lens on your enlarger. Your **FREE** copy of a folder on B&L enlarging lenses is available from your dealer, or on request from Bausch & Lomb Optical Co., 548-W Smith St., Rochester 2, N. Y.

*In preparing a printing plate from the original enlargement, losses in detail have occurred at four stages: screening negative, etching original engraving, impressing wax mold, and plating into wax mold.

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Complete 8mm Movie Outfit consisting of Keystone K8 with F/2.5 coated lens and case, 500-Watt Keystone 8mm Projector and case 30x40 Daltis Screen and General Electric Photo Electric Exposure Meter with case. Regular \$302.95. SPECIAL \$195.40.

SPECIAL

CinKlax F/2.5 Keystone K-160 projector with 30x40 screen, exposure meter and case....Special \$180.50

SPECIAL

Revere 30 turret magazine camera 1" F/1.9 wide angle lens F/2.5 3" Eastman Kodak telephoto lens 50x40" screen Keystone K-160 Projector Gen'l Elect. DW-38 exposure meter with case.....Special \$287.50

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Keystone 16mm A-7 camera F/2.5 with case, sunshade and filter holder, 5 filters, exposure meter. Special \$99.50

SPECIAL

Perfex turret camera F/2.5, wide angle attachment 1 1/2" telephoto lens.....Special \$119.50

NEW 8MM CAMERAS

Bell & Howell Filmo Sportster F/2.5.....	\$102.61
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Bell & Howell Filmo Tri-Lens 8-F/2.5.....	156.78
Bell & Howell Auto-8 turret mag. w/2 lens.....	256.22
Revere 88-F/2.5.....	77.50
Revere 88-F/1.9.....	104.50
Revere 90-Turret F/2.8.....	119.00
Revere 90-Turret F/1.9.....	127.50
Revere 70-Magazine F/1.9.....	127.50
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Bolex H-8-F/1.9.....	362.05
Perfex 88-F/2.5.....	90.50
Perfex 88-F/1.9.....	125.50
Briakin magazine F/2.5.....	70.95
Franklin magazine F/2.5.....	119.50
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Eastman Cine-Kodak Eight-25.....	64.17
Eastman Cine-Kodak Magazine 8.....	168.83
Universal Cinemaster II F/3.5.....	81.90
Universal Cinemaster II F/2.5.....	86.95
Universal Cinemaster II F/1.9.....	96.78

SPECIAL

Univex Cinemaster II. Universal 500 W projector, F/3.5 with 30"x40" screen and case.....Special \$113.52

NEW 16MM CAMERAS

Bell & Howell Filmo Auto Load F/2.5.....	\$186.87
Bell & Howell Filmo Auto Load F/1.9.....	214.08
Bell & Howell Filmo Auto Load F/1.5.....	283.13
Bell & Howell Auto Master turret F/2.5.....	303.08
Bell & Howell Auto Master turret F/1.9.....	332.50
Bell & Howell Auto Master turret F/1.5.....	383.84
Bell & Howell Filmo 70-DA F/2.5.....	327.17
Bell & Howell Filmo 70-DA F/1.5.....	348.21
Revere 16 magazine F/2.5.....	127.50
Revere 16 magazine F/1.9.....	155.00
Revere 30 magazine turret F/2.5.....	182.80
Revere 30 magazine turret F/1.9.....	187.50
Keystone A-7 F/2.5.....	74.50
Keystone A-7 F/1.5.....	107.50
Bolex H-16-F/1.5.....	349.00
Bolex H-16-Switar F/1.4.....	466.28
Eastman Cine-Kodak Magazine.....	175.00
Eastman Cine-Kodak Special.....	588.67
CinKlax F/2.5.....	76.15

REMAC
1 EAST 43rd ST., N. Y. C.

Q.—Wives, kids, and the family dog have a habit of fidgeting under flood lights and complaining about an after-glow in their eyes from flash bulbs. Will speed lighting help eliminate this nuisance?

A.—Yes, because the speed light lasts 1/5000 of a second.

Q.—How do you figure the lens opening?

A.—When it comes to computing the actual exposure, all manufacturers supply factors numbers for certain films. When you divide the number of feet from the subject to the light into the factor number it will give you the F stop to use for that distance.

Q.—Who cooked up that flash bulb formula?

A.—Will Lane—when he was editor of MINICAM in 1939.

Q.—Let's say, for fun, you are taking a portrait with two identical cameras, same film, each ten feet from the subject; what would be the difference in shutter and F using a flash and a speed light?

A.—For an electronic light outfit you might use F:11. The shutter speed would be of no importance because the speed light is so much faster than any shutter. If you are taking the picture with a Press 40 you would use 1/50 at F:22.

Q.—Would the pictures be different?

A.—The one made with the Press 40 at F:22 would have a greater depth of field—so the immediate background and foreground would be sharper.

Q.—In the darkroom, do you process speed light shots the same as for any other kind of photograph?

A.—No. It is recommended that speed-light negatives be developed about one-third longer than normal. The reason is that the "softer" light of the speedlight needs the extra punch of more developing to produce the sparkle we are used to seeing in our prints. Longer development also has the effect of increasing the speed of the film so that we can use a smaller F stop than with normal development; and the manufacturers have included this

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longer development factor in their calculations to arrive at the exposure "guide" number they specify.

Q.—You said before that there were two kinds of speed-light outfits—one uses regular house current (AC) and the other uses two wet-cell storage batteries or dry cells. What is the advantage of the battery model over the AC model?

A.—Portability of the Battery Model is the greatest advantage. It can be carried around on the job, whereas the AC Model has to have an electrical outlet to plug into before it can be used. Usually, the AC Model is used in studios or in home portrait use where outlets are handy. Battery Models are used by magazine and newspaper photographers, candid wedding photographers, etc.

Q.—Are all Speed Lights synchronized the same?

A.—No. Some use mechanical synchronization which is now built into many shutter. Or you can use Kalart and Micro Switch contacts which depend on either the tripper lever or cable release socket as a means of setting off the light at the moment the shutter is wide open. Other Speed Lights use the relay system. These relays make use of the time delay now used with ordinary flash bulb synchronizers. (Magnetic or Solenoid or Synchro-flash Shutter.)

Q.—What are the names of some of the popular speed-light outfits—both AC and Battery models—now on the market and what is the prices range?

A.—By the time this is in print there may be some more, but here's a few for now: Adapta-flash, Buckley Speed-lite, Chromo-Flash, Dormitzer Synctron, Eastman Kodatron, Electronics Specialties, Everflash Speedlite, Fotolux, C-R Strobolux, Johnson Ventlite Speedlite, Kalart Synchronstrob, Kryptar, Reevelec, Reliance Bantam, S-R Strob, Super-Lumen, Triumph, Wabash Electroflash, Wilcox Stobo-lite; range in price from \$69.50 to several hundred dollars depending on size and various electrical features.

Q.—After I buy the speed light, what accessories do I need?

A.—You sound well trained. If your camera already has a built-in shutter synchronization nothing else is necessary. If your camera does not have a built-in shutter synchronization then you buy a synchronizer according to your dealer's recommendations for your camera. If it's a wet battery model using wet cells you will need a charger. You may want an extension unit.

Q.—Can you use speed light with every camera?

A.—They will work with any camera, but can not always to synchronizer with a focal plane shutter. With a Graflex metal contacts can be made on the mirror and when mirror goes up it acts as a shutter.

Q.—Why won't the speed light work with a focal plane shutter?

A.—With this type of shutter, the light passes through a slit in the moving curtain. Since the speed light lasts only 1/5000 of a second the total picture that

you would get would be of the slit in the curtain. Leica now makes a special plate for use with speed light.

Q.—What are some popular make cameras to which the speed light can be used only with open flash, or can be adapted only with considerable expense.

A.—Contax, Korelle Reflex and the old model Mercury. Perflex and box cameras are not satisfactory.

Q.—What are some of the popular cameras made with which the speed light can be used?

A.—Anso, Argus Argoflex, all Eastman cameras, Rolleiflex, Speed Graphic any flash box camera, in fact, with all between the lens shutters.

Q.—How dangerous are Stroboscopic lights?

A.—Not dangerous at all if the simple instructions of the manufacturer are followed. Any condenser carrying a charge of several thousand volts should, naturally, be regarded respectfully; and it isn't a good idea by any means to take the



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power pack apart and poke around its innards with your fingers. As a general rule it is never advisable to take them apart unless you are a radio or electronics technician. Some manufacturers have Service Stations set up for repairs and units should be sent there for checkup and repair. The machines on the market are fool-proof, but they are not damm fool-proof. They should not be used in rooms filled with combustible gas, such as Ether vapor.

Q.—Can they be used for all lighting needs?

A.—Not all, but probably about 80% of all needs for artificial lighting. As stated before, they have to be used with discrimination for shooting outdoors.

Q.—Can you use more than one light?

A.—Yes. Some manufacturers have units on the market which have outlets on the power pack for using one, two and three lights.

Q.—If I have one power pack and have two lights connected to it, will I get the same amount of light out of each lamp?

A.—Yes, but with one power pack hooked up in parallel with the additional lamps, you will get only one-half the light output from any one of the lamps. In other words, drawing the same power from the say, 60 watt seconds of energy pack, (appr. 2000 volts) you will only get 30 watt seconds from each lamp. One manufacturer, using a series hook-up indicates there is an increase of total light of 80% with the addition of an extension light.

Q.—If I am using a battery model light and it is not used for, say a month or more, what should I do to keep it in condition?

A.—When the batteries are not used for a period of time, it is best to check the water level and give it a full charging about once a month. If you are using dry batteries inspect them for leakage.

Q.—How about using electronic lighting with color film?

A.—With the 6500 Kelvin temperature of the light you can get very fair results. Some users say a 2A filter with Koda-

chrome gives a little better rendition than without a filter. Ektachrome gives very good results without a filter. Ansco Color seems to give best color when a 15 or 16 filter is used (UV). Color balance is up to the user, and a little experimentation is advised. For instance you can get a ruddy, outdoor flesh tone by using a CC 15 (wratten) filter. With Electachrome you can use a CC 33. This brings the 6500 kelvin light down to approximately 6100. One thing you can be sure of, your speed light always gives off a constant temperature light all of its life.

Q.—How can Speedlights be improved?

A.—By delivering more actual light on the film. The best way to do this is with improved reflectors especially designed for electronic light. This could also be done by making the light stronger. This can be done two ways: By piling up more voltage to go through the bulb, or by developing a bulb which will deliver more light with the same or less power, and this is being done experimentally now.

Q.—What about the future of Speedlights?

A.—Neither the human eye nor the ordinary camera can record so small a fragment out of the flow of life as can a speed light. With it we can see things we never saw before. Its future opens up more possibilities for capturing a significant moment out of time and space—for those with the eyes and the mind to see.

In the preparation of the article on Speed Light, we are indebted to the following people for technical data and assistance:

Dr. Harold Edgerton of Massachusetts Institute of Technology.

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Emil Karches of Sylvania Electric Products

J. P. Kennedy of Triumph Manufacturing Co.

Don Mohler of General Electric Co.

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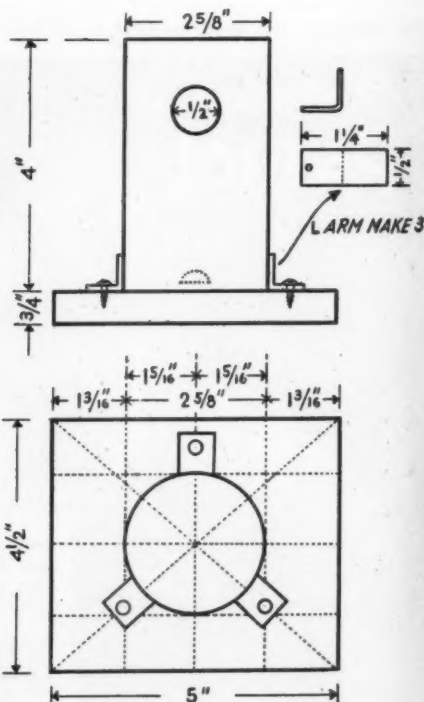
Twinkle-Timer

(Continued from page 63)

an electrical cord, a plug, a jewel light
and four wood screws. For a base board
I used the end from an orange crate cut
down to 4 1/2" x 5" in size.

By drawing a circle on the baseboard
around the edge of the housing can, the
socket fixture can be centered on the
board and fastened down with screws.
This done, connect the wire to the socket,
place the flasher button inside the socket,
and screw in the light bulb on top.

The cover of the soup can will furnish
three strips of tin 1/2" wide and 1 1/4" long.
Each of these strips should have a hole
punched in one end large enough to
accept a wood screw. Then each strip
should be bent in the center to form an
"L" arm that can be used to secure the
housing can to the base.





A hole large enough to accommodate the jewel light should be drilled about 1"

below the closed end of the housing can. The jewel can be held in place with regular solder, or with a few dabs of the kind of liquid solder that comes in tubes. On the side of the housing can opposite the jewel light, a small hole should be drilled about $\frac{1}{4}$ " above the lip flange at the bottom. This hole (near the open end of the housing can) should be just large enough to provide a snug fit for the electrical cord. After the cord has been passed through the hole, the plug for the wall outlet can be connected to the free end.

The three "L" arms should be soldered in position at the base of the housing can; if you have no soldering iron, the arms can be attached to the housing with either rivets or small bolts and nuts. After the housing has been fastened to the baseboard with wood screws, all that remains is to give the baseboard a coat of paint. In addition to dressing up the unit, the paint will act as a gasket to seal off any light leaks that might occur between the housing can and the baseboard.

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BIG PRINTS WITH A SPARKLE

(Continued from page 27)

and less acid for increased intensification is naturally slower in action than the normal solution and should not be speeded up until it becomes almost inactive.

Most Potassium Bichromate formulas call for a long period of washing after use to remove the Bichromate color. This long washing can be eliminated by using a clearing bath which works with this or any other Bichromate intensifier formula. Mix the following:

Water 20 oz.
Potassium Metabisulphite . . 1 oz.

Again the measurements are not critical. Since the Metabisulphite is much cheaper when bought in large quantities, it is best to measure it out into a one-ounce bottle at time of use rather than to buy it in small one-ounce lots. This solution also keeps well and can be poured back into the bottle and used again. Its life is such that it usually has to be replaced when the quantity drops down, through loss, to a point where it becomes difficult to immerse your prints. Otherwise, when it no longer removes the Bichromate in a reasonable period of time, throw it away, for it is better to mix a fresh solution than to replenish an old one.

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Get a large bottle, at least a gallon-size, and cultivate the habit of pouring your old used print developer into it after an evening of print making. Don't worry if it becomes badly stained or discolored, for then it is just really "ripe." It should, however, be used only once for the re-

developing process and then thrown away.

Only by using stale developer will you get the beautiful warm tones that this process is capable of giving. Although it works well on bromide papers, it is better on chlorobromides and best of all on chlorides. A fresh developer will give you increase in brilliance but not warmth of tone. If you prefer a cold tone, redevelop your prints in an Amidol developer, mixed fresh, without the customary Potassium Bromide. A good formula is:

Water 20 oz.
Sodium Sulphite, Anhydrous 1 oz.
Amidol 1/4 oz.

Since the developer keeps for only a few hours, it should be thrown away after using.

Now that all of the solutions have thus been prepared, the rest of the procedure is very simple. First, take any completely fixed, well washed print, wet or dry, new or old, and immerse it in the bleach. The bleaching being completed in just a few

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128

seconds, remove the print, rinse it in running water for fifteen seconds, and then immerse it in the Metabisulphite clearing bath for five minutes, swishing it about in this solution about once a minute. Then again rinse the print in running water for another fifteen seconds. If inspection shows that the Bichromate stain has been removed, it is ready for the final step. Up to this point everything is done under the same safelight used for enlarging.

Redeveloping is done in bright light—the brighter the better. Artificial lighting will do, but direct sunlight is best of all, since solarization adds much to the finished print. Develop the print as far as it will go; from one to three minutes, depending on the strength of your old developer, is usually enough. Then remove the print from the developer and wash in running water for fifteen minutes.

And that's all there is to it. No fixing is necessary. If by chance you don't like the tone of the finished print when dry, you can do it all over again with a different developer. Using fresh developer like that first used on the print for redevelopment will restore the original tone without sacrificing the increased brilliance. For real brown tones you can even redevelop your print in a Sodium Sulphide (not Sulphite) toning solution such as is used with sepia toners.

Prints treated in this manner are quite permanent. If after processing your print has dark spots or areas, it is a sign that it was not properly fixed or washed originally. Further processing will not help such prints; throw them away. Thus the process also gives you an accurate check on the quality of your original print work.



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Black and Whites from Kodies

(Continued from page 82)

to the color temperature specified by color film manufacturers as being correct for color rendition of the dyes used in the color image.

Although correct color temperature is desirable, it is not absolutely necessary for making black-and-white negatives from color slides. If one were to use ordinary incandescent light with a "warmer" color temperature (the more yellow and orange in a light, the lower its Kelvin number), the effect would be the same as using the correct color temperature light in the light-box with a light yellow filter over the copy-camera lens.

An opal glass is also in the light-box between the lights and the transparency. Some form of diffusion must be used in any set-up to assure even illumination and to prevent any possibility of the pattern of the lights themselves getting through to the film. If nothing better is available, a



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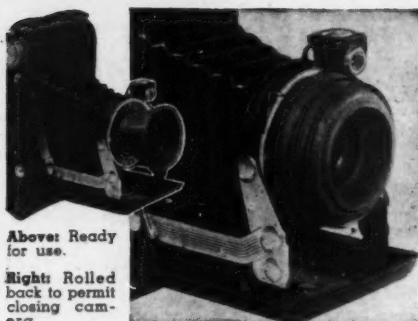
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Pages 149-150-151.

couple of sheets of tissue paper will do. They should be at least an inch or two away from the transparency.

Any light-box, like the one at Grossman's, should be taped up and shielded so that no stray light can leak out around the frame that holds the transparency and cause a light flare in the lens. Any nearby extraneous light should also be turned off, or masked, so that there will be no reflections off the surface of the transparency.

A transparency should be carefully cleaned with "carbon tet" if smudges or fingerprints show up when the glassine envelope is removed. Dust can be brushed or flicked away with a soft brush. When the transparency is placed in the light-box frame, care should be taken to see that it does not bulge or buckle in order to avoid having portions of it out of focus. The frame in the Grossman Knowing light-box holds the color slide along all four edges. When the transparency in its frame is carefully aligned so that it is parallel to the film in the copy camera, we are ready to expose.

What about our lens? Most ordinary camera lenses are optically designed to give maximum efficiency when working from about 5 ft. to infinity. When used for extreme closeups, such as in copying, they sometimes reveal annoying weaknesses — falling off in sharpness at the corners, perhaps, or an overall lack of crisp definition even when the diaphragm is stopped-down. The lens on Grossman's copy camera is a 16" Goerz process lens, specifically designed for closeup work. For all practical

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purposes, however, any normal anastigmat lens will be satisfactory. Try and use as small a diaphragm opening as possible to insure all-over sharpness.

A rough rule of thumb is to "double the exposure for same-size copies." At Grossman Knowing Studios the average exposure is F:32 at 2 seconds on Portrait Pan film. For the "average" transparency, any medium-to-low-speed panchromatic film such as Ansco Isopan or Eastman Portrait Pan will do the trick. At Grossman Knowing Studios they also use Super anchro Press or its equivalent if the Kodachrome is a bit on the harsh or contrasty side. The faster pan films usually yield a "softer," longer-tone-scale negative. In roll-films, the Plus-X and Super-XX types would correspond respectively to the above.

Printing procedure for black and white negatives made from color transparencies is the same as for any negative. In developing these negatives, however, it is recommended that a soft-working type of developer be used, to help cut down the tendency toward excessive contrast inherent in the entire process. At Grossman's the standard developer is DK 50, and for the color copy negatives the usual time is cut 25%. D-76, Microdol or their equivalents, would do the job just as well.

Black and white copy negatives from Kodachromes may also be made through the medium of contact printing along the same general principles as outlined above. The transparency is exposed in contact with a piece of pan film rather than through a camera or enlarger. The problem in using this method is that the lighting in a contact printer is very strong due to the relative slowness of contact paper emulsions, and it is almost impossible to get a *short* enough exposure. The person who likes to experiment can try various screening methods on the light sources such as gray paper, or a rheostat on the power line. Once he has hit upon the right copying technique, it will be easy from then on to make black-and-white record prints from all his transparencies.

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DARK HORSE

(Continued from page 80)

indefinite leave class, which meant that the government paid his train fare and gave him \$20 in addition. Matsumoto headed for New York, staying at a Brooklyn hostel while he wandered all over the occupational field, from busboy at the Hotel New Yorker to gem setter in a lapidary shop. The government relocation agency obtained the latter job for him.

In the meantime, he had enrolled in night courses at the School of Modern Photography, which drained his limited funds. So, Matsumoto decided to invest his last \$50 for a week's course in bartending. It was difficult to find work after the course was completed, but finally he was hired to assist the service bartender at New York's swanky Hotel Chatham in midtown. Unfortunately, he had neglected to check the hours before going to work. They conflicted with his schooling, so he left after a day's work.

The emergency ended when he obtained a job making prints for outside displays of Trans-Lux Theaters, a New York chain of newsreel houses. He worked at this job for a year until he had completed his photographic course.

When asked what he learned from his photographic courses Tosh replied, "Nothing." He laughed. "I don't mean it that way. It seemed like there wasn't much they taught that I didn't know before. But when they were finished with me and said, 'Now you are a photographer,' I thought to myself, 'By golly, I am.'"

"The school gave me confidence in myself. And, of course, wonderful contacts with other students and with teachers and professionals that you get to meet in the process of buying materials, going to lectures, salon shows, meetings; all these things you could do on your own. But probably I wouldn't have."

After graduating Matsumoto went home for a visit and returned to New York ready to try his hand at a professional photographic job. It was 1945, and the

Ladies Home Journal needed a darkroom worker at \$27 a week. Matsumoto got the job, but again lasted only a day. He wasn't yet ready for such work.

One of the instructors at the School of Modern Photography told him about a temporary job in *Vogue's* darkroom. Matsumoto filled in for three or four months while the technician who was ill recovered and, in October, 1945, obtained his present position with John Rawlings, Inc., where he is the only darkroom man.

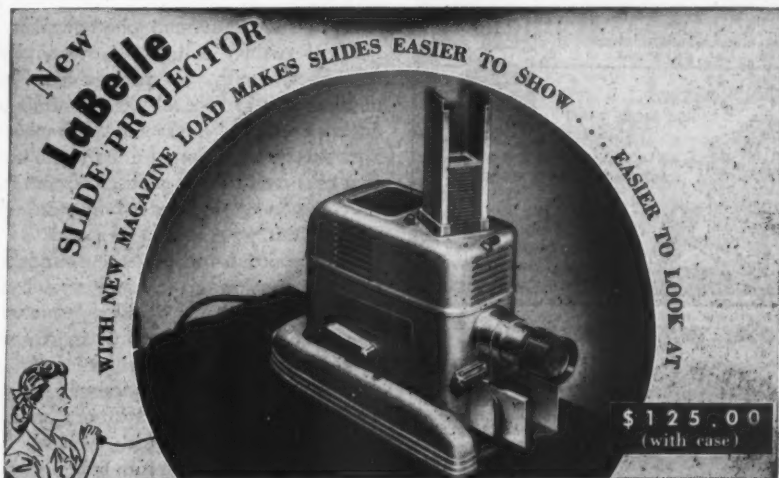
When he was studying at the School of Modern Photography, Matsumoto obtained an Eastman 5x7 view camera which he kept until six months ago. Then he traded it for a 4x5 Auto Graflex (Eastman Anastigmat f 4.5). Two years ago he added a 6x6 Rolleiflex to his equip-

ment and shot largely with that until about two months ago, when he acquired a Leica (Summar f 2), which is his current delight.

Matsumoto does all his darkroom work on his own time (mostly in the evening) at his employer's studio, where he has a Simmon Omega D-II enlarger available. Working in the Rawlings' studio, he has been able to pick up considerable information on fashion and advertising photography.

He does like to take pictures of children, as his amusing shots of Japanese boys show. He believes that child photography will be an easier path to recognition than fashion or advertising camera work.

At one time, Matsumoto carried his



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feeling for tone and lines into an adventure in expressionism. "I was simply trying to be different for the sake of being different," he explains when questioned as to why he abandoned the field.

Since he acquired the Leica, Matsumoto has become interested in action-as-it-happens documentary photography. Right now he is enamored over a two foot stack of photographs which he made of New York City street scenes, all of them imitations and not improvements of current Photo League disciples.

In the street scenes that Tosh makes there is not much emotional pull. Someone once said that if an ambitious-to-be commercial photographer never goes through this stage of abstract street scene photography, he can amount to nothing; and that if he never gets over it he will never be a commercial photographer.

Mr. Rawlings, a highly competent photographer, with a protective *Vogue* manner, looks on all these ambitions dawning in his darkroom with the experienced recognition of a man who knows that once you train a good darkroom man, he commences to wonder what size wings will fit him.

Matsumoto is one of the founders of Lens Expression 12, a camera club that includes some topnotchers among its members. The club recently is exhibiting at the Argent Galleries some of the pictures of Carl Naylor, free-lance photographer; Max Jakin, darkroom man for Alan Fontaine; Richard Meyers, who works for a motion picture company; Jess Sorachi, teacher at the School of Modern Photography; Jim Steinhardt, photo retoucher; Mimi Martel, fashion free-lancer; Jackie Coplan; and Tony Ficarola.

The members of Lens Expression 12 speak affectionately of Matsumoto, his quiet ways, and his meticulous approach to photography. One cited his unusual skill in treating everyday occurrences. Another (Max Jakin) said: "Every time Tosh goes out to take some pictures he comes back with some terrific shots. He never loads up with equipment and you never know he's around."

Models always wait for Tosh to tell them how to pose, but he never directs them; he waits for them to assume natural poses."

The ease and grace of the models is apparent in his pictures. Matsumoto's persistence in trying to get the right setting and conditions for his preconceived shots also shows up in the results. His amusing puddle jumping series according to Max Jakin, was the result of two weeks of uncomfortable searching in the rain for the right street corner for the shots.

Probably Matsumoto comes closest to his dream of documentary photography in the shots he has taken of Japanese at their re-location camp. Here, his pictures have the vibrating emotional pull I found lacking in some of his New York City shots. They all say: "We're people, too. When we are cut, we bleed. What is it that you want to do to our dignity as human beings? We are born here . . . and are Americans!"

But, of course, at that time the F.B.I. maintained to catch the one bad one in a thousand, they would have to lock them all up. In every artist's life, something happens that makes him suffer or that causes him great exhilaration; and after that he matures. The experiences Tosh had at the re-location camp affects his photographs, giving them a gentleness of purpose, and a kindness of intent.

Matsumoto the family man is a study in assimilation. He was married in June, 1947, to a beautician. His wife still works.

Their home is a tiny, two-room apartment on the first floor of a small apartment house, identical with the other houses on the street, in a middle-class neighborhood in Astoria, L. I. The kitchen and living room are one, and as you enter, the first thing you see is a large white electric ice box. The Matsumotos are comfortable there and Tosh is shyly proud of some shelves that he built.

Outside the children of the neighborhood play and quarrel and shout. Upstairs lives his former club member, Sandy Nero, close enough to offer companionship. In the Matsumoto home, you are rewarded with a feeling of happiness.

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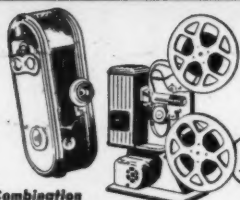
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Shoot Pictures at Night

(Continued from page 66)

respective exposures should be at least one-half (2 1/2 min.) or double (10 min.). I usually give the equivalent of two stops each way when I'm not sure of an exposure.

A few tricks can be employed to help improve existing conditions. If automobiles or trains are moving occasionally across the field of view they will cause long, white streaks because of the headlights. By placing a hand or hat in front of the lens until such objects pass this can be avoided. In the event that you want to photograph a scene in which there is too little light to illuminate the foreground sufficiently, a hand flash may be used by firing a flashbulb at any time during the exposure.

Perhaps the best way to get a great amount of detail in a night photograph is to record it on film by means of double exposure. First the camera is mounted on a tripod and an exposure is made of a building or scene just before dark. This exposure registers the detail. Later, without moving the camera or advancing the film in the meantime, a second exposure is made in order to record the night shot in the usual way. The result is an unusual effect that cannot be otherwise obtained. Detail is visible in the shadow areas, and the highlights appear as blocked up. The first exposure is usually made early enough to be read by a meter. The second exposure is the same as for any other night picture.

Since most night pictures contain the extremes in contrast from brilliant white to jet black, negatives should be processed in a fairly soft developer in order to minimize the contrast. In time you will undoubtedly evolve pet formulas as techniques of your own for processing negatives of night shots; as a starter I would like to recommend that you try a soft-working developer like Microdol or Ansco 17, and underdevelopment of night shot negatives by about 30% of the normal developing time.

BOOK REVIEWS

By EVERETT A. HOUGHTON

COLOR PHOTOGRAPHY FOR THE AMATEUR

By Keith Henney
McGraw-Hill, \$5

Color is a subject which a rapidly growing number of forward-looking amateurs are becoming interested in. Although a great amount of material has been written on the subject, very little authoritative information has appeared in amateur ranks on that part of the topic which perhaps interests the novice most—the processing of color work in the darkroom.

Keith Henney, well known as the co-author of the *Handbook of Photography*, has made this the principal emphasis of his newly revised work on color. A thick book of over 350 pages, it is a detailed and thorough analysis of the various color processes used in this country. The transparency methods of Kodachrome, Ansco, and Ektachrome as well as the printing methods with Carbro, Wash-Off Relief, Dye Transfer, and Printon, are the principal subjects, but the new techniques such as S-T Tripac separation and Ektacolor are also included. Full directions for exposure and development within each process are given, and the author has tried to write as from one amateur to another so that even the completely uninitiated will understand each step before attempting it.

A book like this should be a great saver of time and money to the color experimenter, and it should also be of vast encouragement to the legion of amateurs who have often toyed with the idea of processing color but have never attempted it. And so thorough and painstaking has been the authors treatment that even the professional may garner a few things from it to add to his bag of tricks.

PHOTOFACTS

By Edward S. Bombak
Fountain Press

This pocket-size, spiral-bound handbook is a collection of six photographic calculators and tables for exposing, focusing, copying, enlarging, or developing. Each is similar in design to the disk-type calculators prepared and sold by Eastman for snapshot fans who do not own an exposure meter. Their operation is fairly simple, and in this book it is further clarified by more than adequate explanatory printed material.

The first calculator is for daylight exposure, the second is for artificial light, the third is for both filters and moving objects, the fourth is for depth of field, the fifth is for copying and enlarging, and the last is for film development.

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BUILDING YOUR OWN ENLARGER

By A. G. Stevenson
Fountain Press

With the assistance of detailed scale drawings, the author of this book explains how to build seven different types of enlargers. By emphasizing the use of the simplest kind of materials, such as plywood, he has attempted to make their construction as easy and as economical as possible.

The first chapter is a brief outline of the basic principles of the enlarger. The second chapter explains how the standard baseboard and upright, used with all the enlargers, is put together, after which the remaining seven chapters are devoted to the seven separate types. The instructions are concise and comprehensive, and the scale drawings are large and clear.

In the back of the volume is an appendix of seven sections which contains more darkroom construction projects, including a very handy system of maskholders and masks for projection papers and a safe-light filter which is adaptable to all of the enlargers outlined. Also included is a design for a copying arm which can be used for micrography as well.

It is the author's claim that anyone who can use a rule, a fretsaw, a hand drill and a wood chisel can build any of the enlargers in this book. Judging from the quality of his instructions, his argument is pretty convincing.

HINTS, TIPS AND GADGETS FOR THE AMATEUR PHOTOGRAPHER

Selected from *The Amateur Photographer*
Fountain Press

The many photographers who derive almost as much pleasure from building their own darkroom and studio equipment as from making pictures will find this brief 130-page manual exactly to their taste. In all, there are over 100 different gadgets presented within its pages. Each article is carefully condensed, yet sufficiently comprehensive so that the reader should be able to follow every step without difficulty or confusion. A majority of the articles are accompanied by a simple line drawing or photograph of the project for still further clarification.

All the books reviewed in this column are obtainable from the Book Department, Minicam Photography, 22 East Twelfth Street, Cincinnati 10, Ohio, postpaid, at the prices indicated.

ISLE OF RHYTHM

(Continued from page 89)

for the rights of these people to worship the gods of their own choosing.

Among the natives, there was a feeling that the photographer was "going to make a lot of money" on the pictures and that they should share in this profit. I willingly paid small groups of dancers or presented gifts or rum when it seemed the correct thing to do.

For the purpose of the record, I photographed the *rumba* and *son* dancing at the Gran Casino Nacional in Havana to show the subdued form it reaches when danced in the ball room in Cuba.

La Conga, named after the large, long *conga* drum, originated in the slave quarters of the colonial plantations of Cuba as an unbridled expression of the slave's fettered life. Slaves, it is said, were chained in such a way that they could take but three steps in any direction and were pulled to a halt on the fourth. From this grew the four-beat *conga* rhythm and step.

In Kingston, Jamaica the name "Stork Club" over one place evoked memories of Sherman Billingsley's somewhat swankier bistro and I obeyed an impulse to see behind its doors. A half dozen couples, of mixed colors ranging from white to black and through various gradations of brown, mahogany, maroon and *cafe-au-lait*, were sitting around tables in the front parlor drinking rum and beer. Bar and bedrooms occupied the rear of the house.

There I had my first sight of the Jamaican *mento*, alias *burro*, alias *shay-shay*, one of the more erotic dances of the West Indies.

Originally a folk dance with a love theme, it became a sex-dance when brought to the cities. The *mento* seems designed to excite desires. It has a series of rhythmic movements, mostly in the haunches, stomach and solar plexis. Occasionally one sees a touch of the *rumba* in it but whereas the *rumba* is fast and has much quick foot-work, the *mento* has slow seductive movements such as the rolling belly, the swaying hips and the

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closing of eyes when auto-intoxication occurs.

For contrast I peeped into Joseph Abner's celebrated Glass Bucket and one or two other night haunts of the local gentry. Dim lights and soft music, luxuriously tropical decor, snow-white linen, attentive waiters, long cool drinks, the sight of so many smart women and groomed men, the whole atmosphere of charm and elegance was a lure hard to resist. The dancing, however, was indistinguishable from the dancing at any similar smart supper room in New York, Miami, London or Paris. I drifted back into the night seeking the native dance material.

HAITI is a dancing nation. The *tambours* and *timbales* send their syncopated rhythms across the mountainous jungles from a thousand huts, homes and *tonnelles* on Saturday nights and holiday eves for when Haitians are not worshipping their Voodoo gods with ritualistic dances and ceremonies, they are kicking the gong around in a *bombache* or party with plenty of rum, drum, dance and romance.

There is very little dancing in Haiti, or elsewhere in the West Indies, without gullets properly primed with rum, regardless whether the dancing has a sacred, secular or social purpose.

Rum, sweat, song, trance and dance. To Park Avenue or church Row it must seem obscene or vulgar, but the West Indian Negro obtains from it a release from inner tensions, fears, anxieties and repressions. Dancing is a safety valve, without which the West Indian may become hopelessly despondent or dangerously rebellious.

Despite the bloody history of the Haitian nation, the black peasants of that country have somehow retained their happy nature, sturdy beauty, dignity, friendliness and charm. The hardships they have endured would seem beyond human patience and endurance. During the war years the people lived on less and less fresh food as the crops land gave way to make room for cryptospegia, urgently needed by the United Nations for artificial rubber production.

On one occasion I was attacked physically by a crowd of very angry market women for photographing them but even as they mauled me I could bear them no malice. I love these people and later I returned to make friends with them.

Photographing Voodoo

The eye of an outside observer like myself cannot catch and the mind cannot absorb everything there is to see. The camera eye, unlike the human eye, cannot be jaded and it is always a revelation to study the photographs and see the rapt and enraptured faces of other spectators as well as the movements of the dance.

In Haiti, during a Voodoo ceremony in the back country, their eyes rolling and bodies jerking, dancers drank a light brew, sprayed mouthfuls into other faces, smeared it over their bodies.

Drums and dance never ceased for one moment. Dancers climbed on each other, arms around neck, legs around waist, always in jerks and sudden, sharp, arrested spasms of movement. This was perhaps the first time a Voodoo dance was photographed.

I went mad trying to focus. The only light was a kerosene lamp carried by a girl who was never near me when I needed light most. I could see nothing at all in my ground glass view-finder. I used my last match to check my speed and aperture setting, shuddering to discover that the speed was set for 1/25 second, much too slow for this fast action. How long it had been at that speed I couldn't guess. I slipped into the mud half a dozen times and had to keep pushing away hordes of small boys and men, too, who were fighting to get my exploded flashbulbs. Re-loading the camera with fresh film in total darkness, squatting on my haunches with frenzied negroes falling on me was only a minor difficulty.

Two live chickens were used for the sacrifice this night. Held by the feet, the fowl were swung over the blaze by one of the girls, held in the fire a moment, whirled around her head, thrown over the fire again, pulled out in a continuous movement synchronized to the rhythmic

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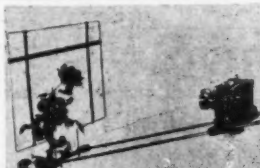
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tambours—and then brushed against the bodies of the worshipers just as life was ebbing from the hapless chickens.

A frenzied girl walked on the flaming wood red-hot coals and clasped the white iron in her hands. She hung from the beams of the little lean-to over the fire and placed her feet squarely on the iron. If there was any sizzling of burning flesh, the drums concealed it.

The girl was in a complete hypnotic state. Her feet showed hot ash, chicken blood, sweat and mud, but no burns. Rolling in the fire, her dress touching the hot iron and licked by flames, she could have burned to death on the spot but she showed no mark of a burn. This is unexplainable.

A long shelf occupying the full length of the shrine was the altar to Osange Agoue Lengi Malo, a god who is represented by a very small smooth round stone scarcely visible among all the other charms, foods, drinks, vases, weapons, flags and other fetiches placed on the altar for him. He is the god of war, one of the oldest in the Voodoo religion and his influence is considered good.

Employers go crazy trying to mold the Virgin Islander into their concept of an efficient, reliable, hard-working worker on par with the average U. S. working man. But even the most energetic white man feels that old langour creeping into his bones after a few months on these enervating islands.

Moralists may decry these conditions, if they wish, but the objective researcher knows that much of the popular jazz music, the foxtrot, *samba*, *tango*, *rumba*, *conga* and other dances and music which are a part of our everyday life came up from these islands. I, no moralist, sought the dance arts wherever they could be found.

That night after I had photographed the Voodoo dances I lay abed reading myself to sleep over John W. Vandercook's book, "Caribbee Cruise," I chanced upon this comment, "Nothing ever happens on St. Thomas after dark more exciting than a game of contract."

PHOTOGRAMS

Pictures without a camera

(Continued from page 68)

Greater variety is possible, however, if we use a freely movable light source such as a flashlight held in the hand. With this method the first step is to calculate our exposure. With the flashlight held at a convenient working distance from a clean sheet of paper, say at arm's length, a series of test strips are exposed. The strip that produces a total black, with normal development, is the maximum time we can give. If the time is too short for convenience we increase the flashlight-to-paper distance or vice versa. Let's say it turns out to be 15 secs. We know, then, that portions of the print must receive less than 15 secs. in order to have high-lights and grey tones; so our exposure range will be from zero seconds, for a complete highlight, to 15 secs. for a dead black.

The important thing, so far, is to have picked out a paper and light combination that allows enough time for several different exposures. This permits shifting of the objects on the paper, changing the distance and angle of the light source between exposures, trying out various kinds of light sources for special effects; or even combining the enlarger method with the objects-on-the-paper method.

Next assemble the "subject matter" which can be anything handy. Typical objects are: drinking glasses, thread, leaves, lace, string, rubberbands, wire springs, wood shavings, or pieces of paper and cardboard cut out in either abstract or literal shapes. Interesting effects can be obtained by pressing ink or oil between two sheets of glass and projecting the squeezed distortion in the enlarger-or multiple printing a regular negative along with a photogram on the same sheet of paper.

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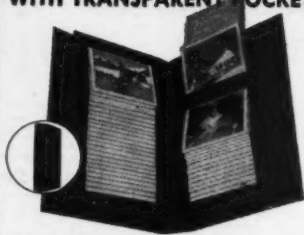


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photogram." In general, it is advisable to first make a single exposure with one object on the paper, or in the enlarger negative carrier. After this has been developed, note the design and tonal relationships, and get acquainted with the idea that the light area you see during exposure will be dark and the "shadow" will be light.

Then begin a series of exposures, changing the positions of the object on the paper. Note how the tones overlap and how three-dimensional effects pop up. Along about now, an idea should begin to shape up as to just what we want this photogram to look like. As with any form of craftsmanship, a photogram needs a direction and an end in view. It cannot be haphazard "photo-doodling." Once a few trial photograms have been made, and an idea matures; it will be easy to make the mechanical decisions on method of lighting, choice of subject matter, and number of exposures.

No discussion of photograms gets far before bumping four-square into the name of L. Moholy-Nagy. As a proponent of experimental photography, he was the driving force behind the photogram's development. His reasoning, condensed, was that a serious beginner has two strikes against him when he starts out trying to photograph a face, for instance. There are all sorts of things to worry about that really don't have anything to do with the fundamentals of photo technique. Facial expressions, character rendering, make-up, backgrounds, and whether or not Uncle Bill has his cravat tied correctly, must be considered.

In a photogram it is only the reaction of light and shadow on an emulsion to worry about: Different contrasts of emulsion, type and intensity of light, varying arrangement of lights and shadows.

This also applies to composition. In producing photograms there is no book of rules. It boils down to simply using light and emulsion to fill a given space with a design that pleases and excites the maker.

The Pro Selects His Best

(Continued from page 58)

dollars per day. Some well-established men's fees soar way above this figure for a single shot, and some stories are done for less. Twelve days' actual work per month is a good average. The remainder of the time is spent in traveling, making arrangements, and setting up.

While free-lance and staff man show great variation in their choice of equipment, they all use the 2¼x2¼ twin-lens reflex camera. Although their choice is influenced by portability, this is far from the decisive reason for the universal acceptance of this "little camera." It is an extremely versatile instrument, the most omnipotent camera available today. It employs film available all over the world, and allows ground glass focusing.

It is for this reason that while many men carry larger cameras—3¼x4½ or 4x5, rarely an 8x10—the bulk of the work seen in magazines today was photographed with one of these 2¼x2¼ twin-lens reflex cameras. When candid pictures are needed in adverse lighting conditions, they use a 35mm camera.

Photography is a Language

Like all artists who have something to say, photographers, too, run up against the limitations of speaking through mass media. Magazines work on proven formulas which corral readers. Mass readership is, in turn, sold to advertisers. This arrangement happily provides relatively large editorial funds but leaves, perforce, many good things photographically unsaid.

For photography has been truly called by one of its most ardent champions, John R. Whiting, a language. It speaks to millions in its various ways.

There is the Brownie snapshot or friendly, informal letter which says: "How are you? We are fine. Wish you were here. Look at my new hat."

(Continued to page 146)

The text and photographs of this article are from the book "Photo-Graphic '49" published by Whittlesey House (\$6.95), N.Y.C.



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There is the press photograph which screams: "Tot slays self, five." Or "Revolution rages in Latin America."

There is the salon photograph which speaks softly of trivia and the studio-bound artiste who writes the expressionist poetry of the visual language.

Covering the great bulk of communication stands the magazine photograph. It has a little of the hard-bitten fact of the press picture, some of the feeling-about of the amateur experimentalist, a good deal of the artistry of the ivory tower poet, the friendly informality of the snapshot. It is important now and its possibilities are boundless.

This, then, is the general outline of the profession, so young yet so important, magazine photographs have become strong and powerful purveyors of art and ideas, fact and fancy, far beyond the dreams of Father Daguerre.

How an Assignment Begins

A picture story begins as an idea that demands photographic treatment and its fate is often determined before the photographer has had an opportunity to influence its direction.

If the photographer is fortunate, he will be called upon at an early stage in the development of the story. He will be asked for his ideas, and his visual approach and picture-thinking will help determine locale, subjects, and the general photographic treatment. Better stories, editorially wiser photographers, and better picture editors result from this kind of participation and cooperation.

In contrast to this procedure, a story may be developed into a detailed shooting script, and a hard and fast schedule of shots, which is the product of a purely verbal-minded editorial staff. A few editors think that there is more to it, that some stories demand other elements; there are still many photographers who feel that such blueprinting offers serious limitations to their work.

A photographer lives hectically, and exhaustion is the occupational hazard. Few editors know or care how many hours

were spent in a stifling darkroom or racing around hunting for just the perfect prop. They're interested in the prints that finally come across their desks.

Despite the frenzy, and possibly because of it, every magazine photographer steals some quiet time for contemplation, for a sort of dreamlike musing on his past and future pictures. In these interludes, he pulls himself together as an artistic identity, defeating the centrifugal forces which seem to be pulling him apart.

Is Fashion Just A Living?

A number of the members of the Society of Magazine Photographers are working for *Vogue*, *Harper's*, *Bazaar*, *Charm*. The world in which they live is peopled by models who come to work wearing what amounts to a regulation uniform of flat gold shoes, corduroy skirt, white blouse, and a plain swept back hair-do.

A fashion photographer develops a kind of inferiority about the importance of his fashion work when stacked up alongside that of other photographers. It is significant that when fashion photographers were asked to submit their best pictures for the Society's first book, everything but fashion photographs was handed in. This section exists at all only as a result of a last-minute job of pleading and storming on the part of the Society.

The key to the paradox is the photographic subject. Fashion is ephemeral. Five gruelling hours of work may result in a superb photograph of a hat. Though subtly reflecting manners and mores, it is still primarily the photograph of a hat. A documentary photographer may spend five hours on a picture, but he has recorded a revolution, a strike, a universal event. He has recorded news. Time makes it history. By contrast, there is the fashion photographer and his hat picture. It concerns one sex, one strata of society, one portion of the globe. It has an esoteric and specific interest as against a universal one. He has recorded a fashion. Time merely makes the fashion unfashionable. Possibly it is the turn of the head or the tilt of the feather. In a matter of months, the very essence of

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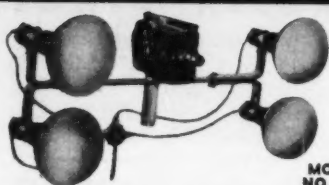
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its being—the fashion itself—is passé.

The destiny of a fashion photographer is twined with fashion, and fashion is a perishable commodity. It slips through the fingers and dissolves into tomorrow. Ten years from the day the picture was taken, the studios head may nod, the scholarly finger may indicate that there, indeed, was a milestone in photography. But dissection always indicates death. The photograph lived once and briefly when it stopped several thousand eager eyes and anchored them to the page it was printed on. Later recognition is academic tribute. And the essence of fashion, however mental the photographer's approach, is not intellect but emotion.

Yet some fashion photographs survive purely on their esthetic excellence, everlasting credit to the talent that conceived them and a directional arrow for the neophytes to follow. The best efforts of the fashion photographer are fine art.

As with fashion itself, there are, inevitably, cycles in fashion photography. When, twenty years ago, Munkacsi took high fashion out of doors to give it fresh air and action, that was the beginning of a new candid school. When, four years ago, Richard Avedon turned an electric fan on his models, that was the germ of another.

As the fashion photographer strikes his stride, he evolves his personal formula, which is individualized to the extent that no one familiar with the field need glance at a credit line to identify the photograph. The melting luminosity and muddled pastels of a Dahl-Wolfe, the gold-tone elegance of a John Rawlings, the arrogant humility of a Penn composition, the female perception of a Frances McLoughlin, the young, high-key informality of a Mark Shaw, the flat-of-the-hand impact of a Landshoff, these are signatures—and standards—unto themselves. These are definite steps in a progressive evolution.

Dogs and cats, if not lions and lambs have been known to live together, and editors and photographers break daily bread together, too.


The mutual complaint between editor

and photographer arises because, by and large, each profession is pretty much in ignorance of the other. Just as Mrs. Jones doesn't believe that the old man had a "hard day at the office," and Mr. Jones takes no stock in her having "bent over the hot stove all day," editors know little about the field problems of photographers; photographers don't know, or won't admit, that the editor serves many masters: publisher, readers, writers, art directors, and his own conscience, and that his decisions may not *always* be the result of the fact that he is a warped, sadistic personality, bent on the destruction of good photography.

Although a new trend toward cooperation is becoming evident, and many magazines are allowing the photographer a greater voice in the planning of stories so that there are less complaints all around, editor stories still circulate, and probably always will.

Just recently one of the ASMP members was assigned to shoot the flight of black hawks in a dense wood at twilight. Holding out for verisimilitude, he did the story and was told in no uncertain terms by the editor that the pictures would never reproduce; they were too murky. He visited the hawks again and this time used strobe lights. The editor loved the pictures. The photographer got letters from amateurs all over the country saying that the set was completely phony, unlikable, posed—in short, that the photographer should be ashamed of himself.

When the chips are down a photographer's best friend is his mother.



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REVERSAL PROCESSING—Completely automatic machine—1/25" 8mm 35c; 50' 16mm 75c; 100' 16mm, 85c. Ultrix, G.O.F., Box 730-C, Brooklyn 1, N. Y.

FILMS—Developed and Printed 25c. Reprints 3c. Enlargements—5x7, 15c, 8x10, 25c. Tru-Art Studio, P. O. Box 432, Utica, N. Y.

35mm FILM. Roll fine grain developed, every picture enlarged to a 4x4 glossy print; 35 exposure roll, \$1.00 exposures, 65c. Credit given for non-printing negatives. Reloads with fresh, fine grain panchromatic film; 35 exposures, 45c; 20 exposures, 30c. Black-and-white projection transparencies; 90c for 36 exposures (unmounted). Satisfaction guaranteed or complete refund. Additional savings to coupon purchasers. Write for free mailing container and complete information. Dept. 10M, Rochester Laboratory, Inc., Box 199, Rochester 1, N. Y.

ENLARGEMENTS, 5x7, 15c; 8x10, 25c. See Pan. Laboratories, 1552 Wilder St., Rochester 11, New York.

ANSKO COLOR, Ektachrome Processing, 120-620, \$1.00. 35mm 20 exposures mounted, \$1.00. Color Prints, 24x34, 35c; 4x5 mounted, 98c; 5x7 mounted, 98c; 8x10 mounted, \$2.98. Prompt Service. Write for Free Mailing Bags and Price List. Multicolor Laboratory, Box 44, Ames Avenue Station, Omaha 11, Nebraska.

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HOME MOVIES—New Catalog 15c. with projection sample "Allure," \$1.00. Natural color slides—views, art, glamour—lists 3c, with sample, 35c. Gallopway Films, 3008 5th St., S.E., Washington 20, D. C.

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SALONS AND EXHIBITS

★ FOLLOWS P.S.A. RECOMMENDED PRACTICES

Closing Date	Name of Salon	For Entry Blank, Write to	Number of Prints and Entry Fee		Dates Open to Public
Exhibit to see	Twenty-third Annual Salon of Photography.				Museum of Fine Arts of Houston, Houston, Texas, Oct. 10-24
Exhibit to see	★Eighth Annual Victoria International Salon of Photography.				Empress Hotel, Victoria, B. C., Canada, Oct. 17-24
October 6	★1948 P.S.A. Exhibition of Photography.	Clarence Ruchhof, 3756 Middlebrook Ave., Cincinnati 8, Ohio.	4 prints and/or slides in 3 divisions; plus motion picture films	\$1.00 each division; motion picture fee varies	Cincinnati Art Museum, Cincinnati, Ohio Nov. 3-14
October 10	★6th Annual International Photographic Salon of Trail Camera Club.	Trail Camera Club, Box 35, Trail, B. C., Canada.	4	\$1.00	Masonic Hall, Trail, B. C., Canada, Oct. 27-30
October 20	★Fourth Mississippi Valley International Salon of Photography.	Norman Brice, Salon Chairman, 51 Ridgemoor Dr., St. Louis 5, Mo.	4 mono-chrome, color or transparencies	\$1.00	City Art Museum, St. Louis, Mo., Nov. 6-21
October 23	★Eighth Annual Salon of Nature Photography.	Kentucky Society of Natural History, Box 81, University of Louisville, Louisville 8, Ky.	4 prints and/or transparencies	\$1.00 each division	University of Louisville, Louisville, Ky., Nov. 21-28
October 25	★First Minneapolis Color Slide Exhibition.	George C. Johnston, 114 S. 5th St., Minneapolis, Minn.	4 2x2 slides	\$1.00	Y. W. C. A., Benton Hall, Minneapolis, Minn., Oct. 30 and 31
November 2	★17th Annual Minneapolis International Salon of Photography.	George C. Johnston, 114 S. 5th St., Minneapolis, Minn.	4	\$1.00	Minneapolis Institute of Arts, Minneapolis, Minn., Dec. 5-30
November 8	Third Omaha International Salon of Photography.	Mrs. Edwina Mogridge, Chairman, 6031 Manderson St., Omaha, Nebr.	4	\$1.00	Joslyn Memorial, Omaha, Nebr., Nov. 24-Dec. 19
November 13	Seventeenth Annual Detroit International Salon.	Earle W. Brown, Salon Secretary, 19355 Greenlawn, Detroit 21, Mich.	4 prints or color slides	\$1.00	Detroit Institute of Arts, Detroit, Mich., Dec. 19-Jan. 9
November 16	Second Hudson - Mohawk International Salon of Photography.	Mrs. Mabel Lehman, 445A First St., Albany, N. Y.	4	\$1.00	Albany Institute of History and Art, Albany, N. Y., Dec. 9-Jan. 3
November 24	★First Magic Empire Color Slide Exhibit.	E. A. Nesbitt, 1042 N. Gary Place, Tulsa 4, Okla.	4 2x2 slides	\$1.00	Dec. 1-8
November 30	★II Cuban International Salon of Photography.	Club Fotografico de Cuba, O'Reilly No. 366, altos, Havana, Cuba.	4	\$1.00	Gallery of Club Fotografico de Cuba, O'Reilly 366, altos, Havana, Cuba, Jan. 10-30
December 6	★11th Annual Springfield International Salon of Photography.	Louise Lochridge, Salon Secretary, The George Walter Vincent Smith Art Museum, Springfield 5, Mass.	4	\$1.00	The George Walter Vincent Smith Art Museum, Springfield, Mass., Jan. 3-23
December 7	First Maryland Salon of Natural Science Photography.	Earl H. Palmer, Chairman, c/o Natural History Society of Maryland, 2101 Bolton St., Baltimore 17, Md.	4	\$1.00	Baltimore Museum of Art, Baltimore, Md., Jan. 4

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